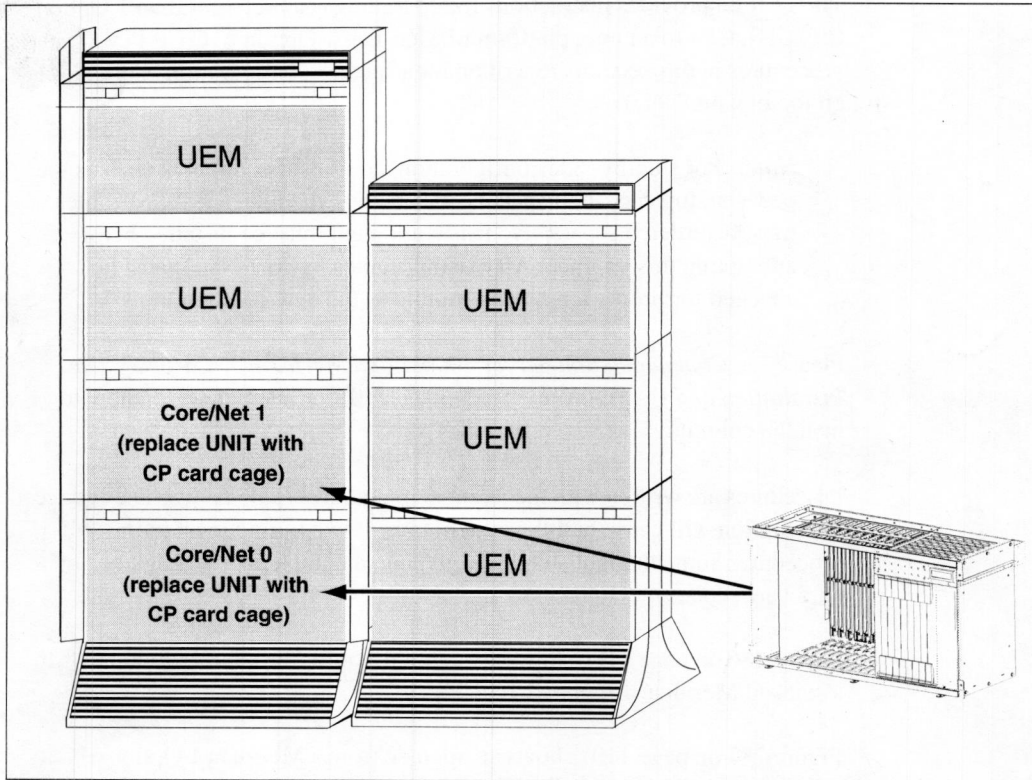


Figure 286
Meridian 1 Option 61C to Meridian 1 Option 61C CP PIV stacked



Meridian 1 Option 61C upgrade to Option 61C CP PIV

This section provides instructions for upgrading a source Meridian 1 Option 61C CP3, CP4 to a target platform of Meridian 1 Option 61C CP PIV. The procedures in this section are written for a stacked configuration (Core/Net 1 on top of Core/Net 0).

Note: For side-by-side configuration, additional equipment such as the pedestal, top cap, shelf spacers, or NT4N41 module, and XSM cables must be ordered separately. This equipment must be installed before attempting this upgrade. All existing cables in Core/Net 1 must be checked for proper length and routing to the new configuration.

Please see *Communication Server 1000M and Meridian 1: Large System Installation and Configuration* (553-3021-210) for instructions on how to install a column.

Procedures are written with the intent to maintain partial service. The service interruption will cause half the system to be down during most of the procedure. Some thought should be given to a complete power down hardware replacement process.

Figure 286 on page 1196 shows an upgrade from a Meridian 1 Option 61C to a stacked Meridian 1 Option 61C CP PIV.

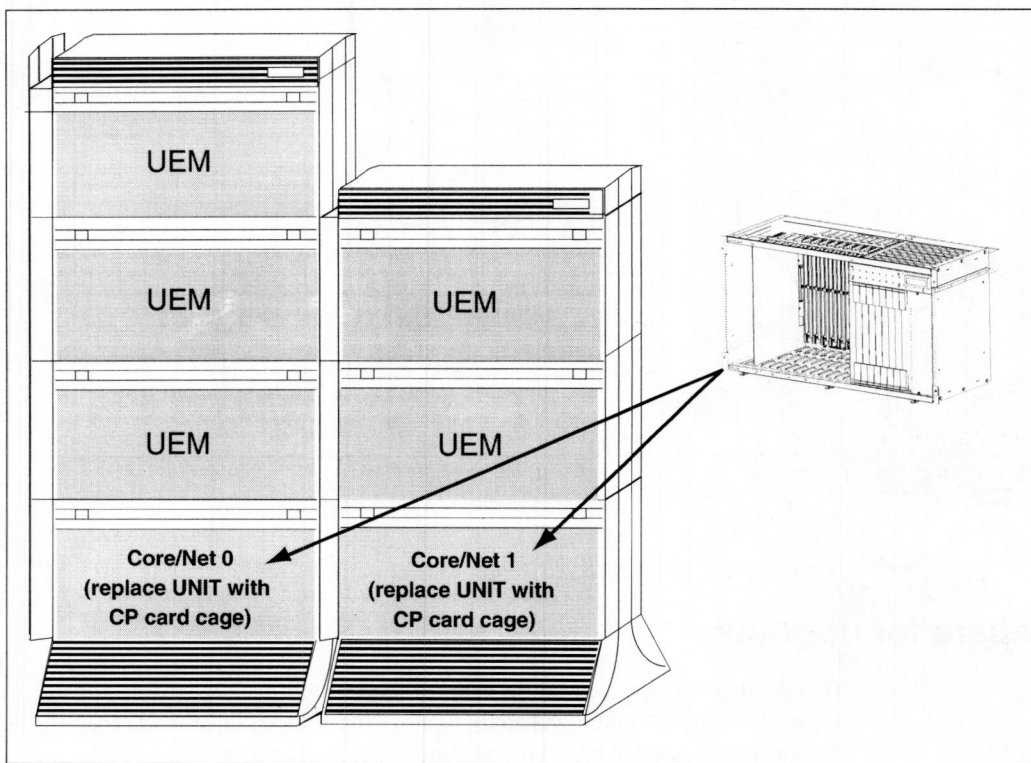
Figure 287 on page 1197 shows an upgrade from a Meridian 1 Option 61C to a side-by-side Meridian 1 Option 61C CP PIV.



DANGER OF ELECTRIC SHOCK

In a DC-powered system, power to the column can remain on during the following procedures. In an AC-powered system, however, power to the entire column *must* be shut down throughout the procedures.

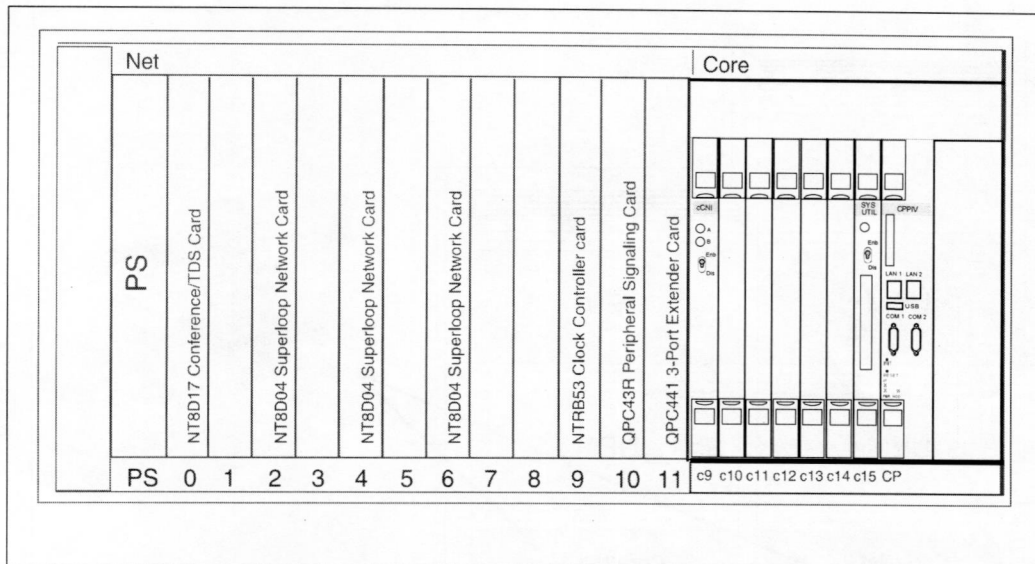
Figure 287
Meridian 1 Option 61C to Meridian 1 Option 61C CP PIV side-by-side



This upgrade takes a Meridian 1 Option 61C to a single-group Meridian 1 Option 61C with CP PIV. CP PIV cards are located in the Core/Net modules or card cage (see Figure 288 on page 1198).

- The card cages in the existing Core/Net modules are replaced with NT4N40 CP card cages.
- Existing network cards are relocated to the NT4N40 CP card cage.
- The existing Clock Controllers are moved from the old Core/Net to the CP PIV Core/Net in slot 9.
- An IPE module can be installed on top of CP PIV Core/Net 0 module.

Figure 288
NT4N41 CP Core/Net Module



Prepare for upgrade

This document implements a “source- to-target” approach to performing an upgrade. It is important to correctly identify the source platform, target platform, and maintenance window required to perform the upgrade.



IMPORTANT!

This upgrade requires that the PC you are working from is equipped with a floppy disk drive and CF reader (or, if a CF reader is not available, a PCMCIA CF adaptor).

Each section features check boxes indicating what state the system should be in at that stage of the upgrade. If the system is not in the proper state steps should be taken to correct this.

Each section is written to maintain Dial Tone where possible and limit service interruptions.

Before attempting any software or hardware upgrade field personnel should follow the steps in Table 151:

Table 151
Prepare for upgrade steps

Procedure Step	Page
Plan upgrade	1199
Upgrade Checklists	1200
Prepare	1200
Identifying the proper procedure	1201
Connect a terminal	1201
Check the Core ID switches	1202
Print site data	1205
Perform a template audit	1208
Back up the database (data dump and ABKO)	1210
Transferring the database from floppy disk to CF (customer database media converter tool)	1213
Identify two unique IP addresses	1232

Plan upgrade

Planning for an upgrade involves the following tasks:

- Conduct a site inspection to determine proper power and grounding.
- Review the site profile to determine proper foot space if adding new columns or modules.
- Ensure sufficient power for new columns/modules or applications.
- Identify all applications that are currently installed on the source platform.
- Identify and correct outstanding service problems.

- Verify the site log is updated with current trunking, call routing, application notes, and site contact information.
- Review all product bulletins and Nortel Alerts that impact the site.
- Determine if software can be converted on site or must be sent to Nortel.
- * • Prepare a contingency plan for backing out of the upgrade.



DANGER OF ELECTRIC SHOCK

In a DC-powered system, power to the column can remain on during the following procedures. In an AC-powered system, however, power to the entire column *must* be shut down throughout the procedures.

Upgrade Checklists

Upgrade checklists can be found in “Upgrade checklists” on page 1749. Engineers may print this section for reference during the upgrade.

Prepare

Preparing for an upgrade involves the following tasks:

- Identify and become familiar with all procedures.
- Verify that all installed applications meet the minimum software requirements for the target platform (see *Communication Server 1000M and Meridian 1: Large System Planning and Engineering* (553-3021-120)).
- Verify proper cable lengths for the target platform.
- Verify card vintage requirements of the target platform.
- Determine and note current patch or Dep lists installed at the source platform.
- * • Determine required patch or Dep lists at the target platform.
- Determine and communicate the required maintenance window, contingency plan and the impact to the customer to complete the procedure.

- Perform an inventory on required software and hardware.
- Secure the source software and key code.
- Secure the target software and key code.
- Verify the new key code using the DKA program.
- Print site data.

Identifying the proper procedure

Each procedure has been written in a “source- to-target” format. Each procedure features warning boxes and check boxes placed at critical points. Changing the procedure or ignoring the warning boxes could cause longer service interruptions.



IMPORTANT!

Preserve database backup information for a minimum of 5 days.

Connect a terminal

Procedure 349 **Connecting a terminal**

A maintenance terminal is required to access the Core or Core/Net modules during the upgrade procedure.

- 1 Connect a terminal to the J25 port on the I/O panel in the *inactive* Core or Core/Net module.
- 2 The settings for the terminal are:
 - a. 9600 baud
 - b. 8 data
 - c. parity none
 - d. 1 stop bit
 - e. full duplex

f. XOFF

- 3 If only one terminal is used for both Core or Core/Net modules, the terminal must be connected from side-to-side to access each module. An "A/B" switch box can also be installed to switch the terminal from side to side.

End of Procedure

Check the Core ID switches

Procedure 350

Checking the Core ID switches

Each NT4N40 Core/Net card cage or module (see Figure 289 on page 1204) is identified as "Core 0" or "Core 1". This setting is made by a set of option switches on the System Utility card (see Figure 290 on page 1205). The Core ID switches are set in the factory. Confirm that these settings match the identification labels for the module into which they will be installed.



CAUTION — Service Interruption

The CP Core/Net card cages **MUST** be installed in the correct Core 0 or Core 1 module.

- 1 Pull the System Utility card (NT4N48) far enough out of its slot so you can see the ID switch settings.
- 2 Check and confirm the switch settings according to Table 152 on page 1203.
- 3 Reinstall the System Utility card.

- a. Gently slide the card into the slot until it makes contact with the backplane. Never force a card into the slot.
- b. Push in the top and bottom latches on the card to lock it in place.

End of Procedure

Table 152
Core module ID switch settings (System Utility card)

	Position 1	Position 2
Core 0	On	On
Core 1	Off	On

Figure 289
Core card placement in the NT4N40 Core/Net card cage (front)

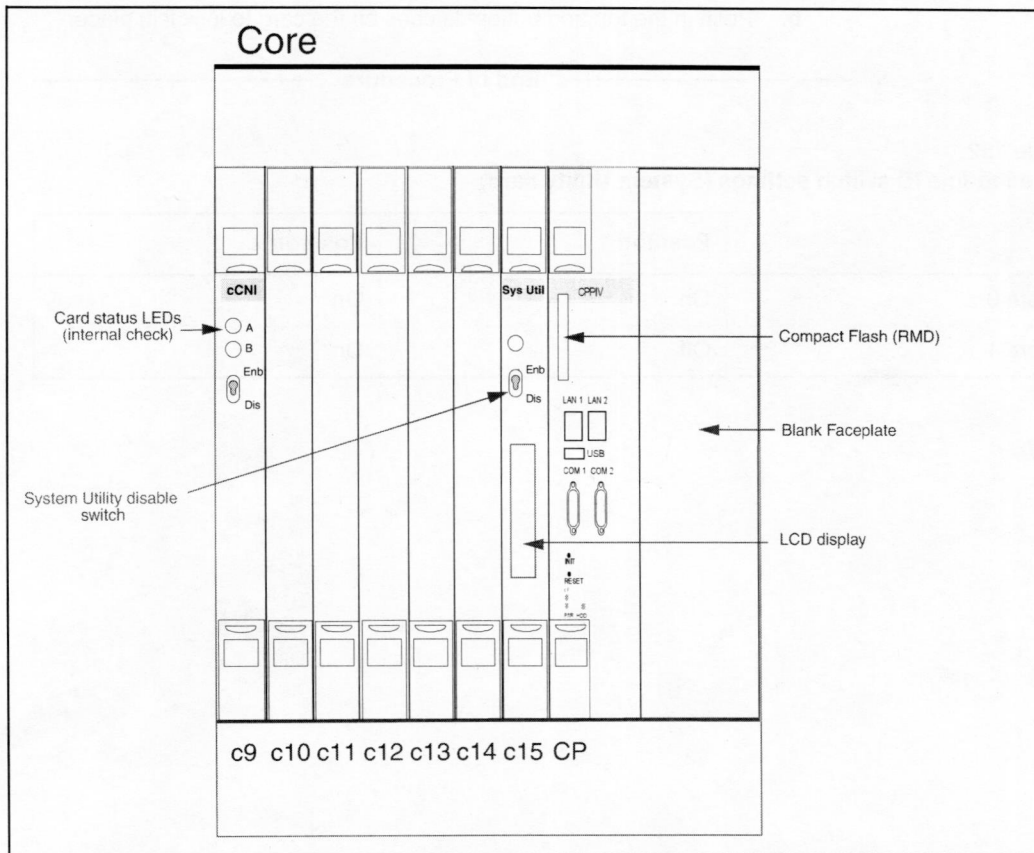
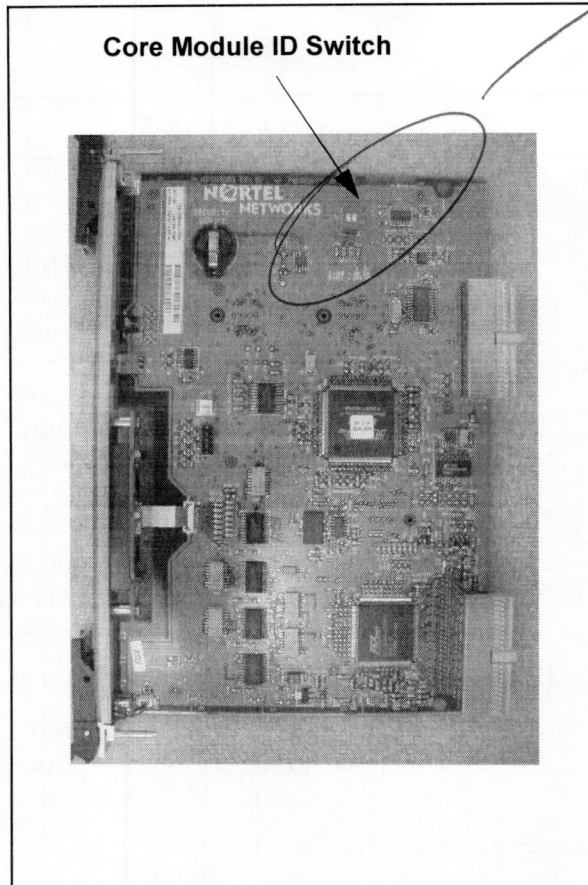


Figure 290
Core Module ID switch



Switch pins
Core 0 & Core 1



Print site data

Print site data to preserve a record of the system configuration (see Table 153 on page 1206). Verify that all information is correct. Make corrections as necessary.

100-1182105 LN
 1075 D97AD
 1075 D97AD

Meridian 1 Option 61C

marked with an asterisk (*) are required. Other items are for a total system status.

	Print command	
	LD 20	
	REQ	PRT
	TYPE	TNB
	CUST	<cr>
Directory Numbers	LD 20	
	REQ	PRT
	TYPE	DNB
	CUST	<cr>
Attendant Console data block for all customers	LD 20	LD 20
	REQ	PRT
	TYPE	ATT, 2250
	CUST	<cr>
*Customer data block for all customers	LD 21	LD 21
	REQ	PRT
	TYPE	CDB
	CUST	<cr>
Route data block for all customers	LD 21	
	REQ	PRT
	TYPE	RDB
	CUST	Customer number
	ROUT	<cr>
	ACOD	<cr>
*Configuration Record	LD 22	
	REQ	PRT
	TYPE	CFN

Table 153
Print site data (Part 2 of 3)

Site data	Print command	
*Software packages	LD 22	
	REQ	PRT
	TYPE	PKG
*Software issue, ROM and tape ID	LD 22	
	REQ	ISS
	REQ	ROM
	REQ	TID
* Peripheral software versions	LD 22	
	REQ	PRT
	TYPE	PSWV
ACD data block for all customers	LD 23	
	REQ	PRT
	TYPE	ACD
	CUST	Customer Number
	ACDN	ACD DN (or <CR>)
Superloop card IDs and software version (peripheral controller, superloop network and controller cards)	LD 32	
		IDC loop
Multi-purpose ISDN Signaling Processor (MISP) card	LD 27	
	REQ	PRT
	TYPE	MISP
	LOOP	loop number (0-158)
	APPL	<cr>
	PH	<cr>
DTI/PRI data block for all customers	LD 73	
	REQ	PRT
	TYPE	DDB

Table 153
Print site data (Part 3 of 3)

Site data	Print command	
Print the configured host information	LD 117	PRT HOST (provides system IP addresses)
Superloops and XPEs	LD 97	
	REQ	CHG
	TYPE	SUPL
	SUPL	Vxxx
		V stands for a virtual superloop and xxx is the number of the virtual superloop.
		xxx = 0-252 in multiples of four for MG 1000E
		xxx = 96-112 in multiples of four for MG 1000T (See Table 29)
Note: Items marked with asterisks (*) are required printout for conversion. Other items are recommended for a total system status.		

Perform a template audit

A template audit (LD 01) reviews the templates in your system. Corrupted and duplicate templates are cleaned up. An example of the information generated during the audit is listed below.

Note: The template audit may take an extended period of time on large systems. Run the audit during a low traffic period.



CAUTION — Service Interruption

Loss of Data

Do not abort this overlay until the audit is complete. If the overlay is interrupted, data will be corrupted.

LD 01 The audit begins as soon as LD 01 is entered.

TEMPLATE AUDIT

STARTING PBX TEMPLATE SCAN

TEMPLATE 0001 USER COUNT	CHECKSUM
LOW	OK

TEMPLATE 0002 USER COUNT	CHECKSUM
HIGH	OK

TEMPLATE 0003 NO USERS FOUND

STARTING SL1 TEMPLATE SCAN

TEMPLATE 0001 USER COUNT OK	CHECKSUM
	OK

•
•

TEMPLATE 0120 USER COUNT OK	CHECKSUM
	OK

TEMPLATE AUDIT COMPLETE

Back up the database (data dump and ABKO)

To back up system data, complete the following two procedures.

- 1 Perform a data dump to save all system memory to the hard disk.
- 2 Perform a ABKO (attended backup) to save the database to a spare set of floppy disks.

Procedure 351

Performing a data dump

- 1 Log into the system.
- 2 Load the Equipment Data Dump Program (LD 43). At the prompt, enter:

LD 43 Load program

- 3 When "EDD000" appears on the terminal, enter:

EDD Begin the data dump



CAUTION — Service Interruption

Loss of Data

If the data dump does not succeed, do not continue. Contact your technical support organization. You must correct a data dump problem before the system can be upgraded.

- 4 The messages "DATADUMP COMPLETE" and "DATABASE BACKUP COMPLETE" will appear once the data dump is complete.

**** Exit program

End of Procedure

Procedure 352

Performing an ABKO (save the database to floppies)

- 1 Insert floppy diskettes into BOTH floppy disk drives in each Core IODU/C or MMDU.

Note: If the file is too large to fit on a single floppy disk, the ABKO command will compress the data. If the compressed data is still too large to fit on a single disk, both floppy disks in the two IODU/C drives will be used. Be sure to insert floppy disks into BOTH IODU/C drives before the ABKO backup is begun.

- 2 Load the Customer Configuration Backup and Restore (LD 143). At the prompt, enter:

LD 143 Load program

- 3 Run the ABKO backup (LD 143).

ABKO Run backup

Result: If the backup is successful, the system displays a message that states that the database backup is complete and generates a report that indicates which floppy drives were used.

- 4 If there are validation errors, repeat the procedure.



CAUTION — Service Interruption

Loss of Data

If the backup is not successful, do not continue; contact your technical support organization. Any backup problems must be corrected before the system is upgraded to CP PIV.

- 5 Once the backup is complete, type:

**** Exit program



IMPORTANT!

If the system is equipped with IOP/CMDU cards the database must be converted with the Database Transfer utility below.

If the system is equipped with IODUC cards, the database should be data dumped (EDD) to a blank 2 MByte floppy.

All systems can be converted by Nortel in the software conversion lab.

Procedure 353

Converting the 4 MByte database media to 2 MByte database media

Before the system is upgraded to CP PIV, the database must reside on a 2 MByte floppy disk for conversion to CF. Systems with an IODUC drive already have 2 MByte floppy drive and can skip this procedure.

If the database is on a 4 MByte floppy (the system has an IOP/CMDU), the 4 MByte customer database must be transferred to a 2 MByte floppy disk.

- 1 Split the Cores and transfer call processing to Core 0.
- 2 Install the Database Transfer Utility diskette into the floppy drive on the IOP/CMDU in Core 1.
- 3 Press the reset button (MAN RST) on the Call Processor card in Core 1 to reboot the system. Start the Database Transfer Utility Tool.



CAUTION — Service Interruption

Select only options:

- <t> Tools Menu from the Install menu, and
- <s> To archive database from the Tools menu.

DO NOT select any other options. Other options can result in operating system corruption.

4 From the installation menu select:

- <t> Go to the Tools menu.
- <s> Archive existing database.
- <cr> <a> Continue with archive (insert blank 2 MByte diskette from the software kit into the floppy drive in Core 1).
- <cr> <a> Diskette is now in floppy drive in Core 1.

5 The message displays "Database backup complete!" and the Tool menu appears again after the backup completes correctly.

6 Remove the 2 MByte customer database diskette from the floppy drive of the IOP/CMDU. Do not reboot the system at this point.

End of Procedure

* Transferring the database from floppy disk to CF (customer database media converter tool)



IMPORTANT!

This upgrade requires that the PC you are working from is equipped with a floppy disk drive and CF reader (or, if a CF reader is not available, a PCMCIA CF adaptor).

The floppy disk that contains the backed up customer database needs to be transferred to a CF card. This procedure converts the customer database from a 2 MByte floppy disk to CF card, which is restored during the CS 1000 Release 4.5 software upgrade later in this section. Nortel recommends using the extra CF card included with the Software Install Kit.

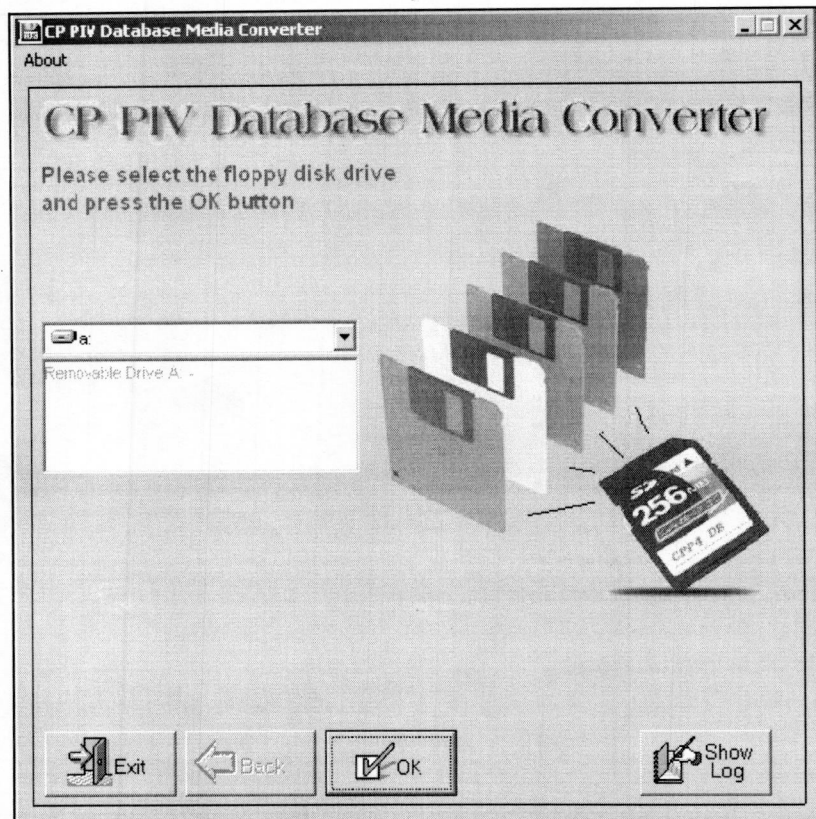
Procedure 354

Transferring the customer database from floppy disk to CF

This procedure requires that the PC you are working from is equipped with a floppy disk drive and CF reader (or, if a CF reader is not available, a PCMCIA CF adaptor).

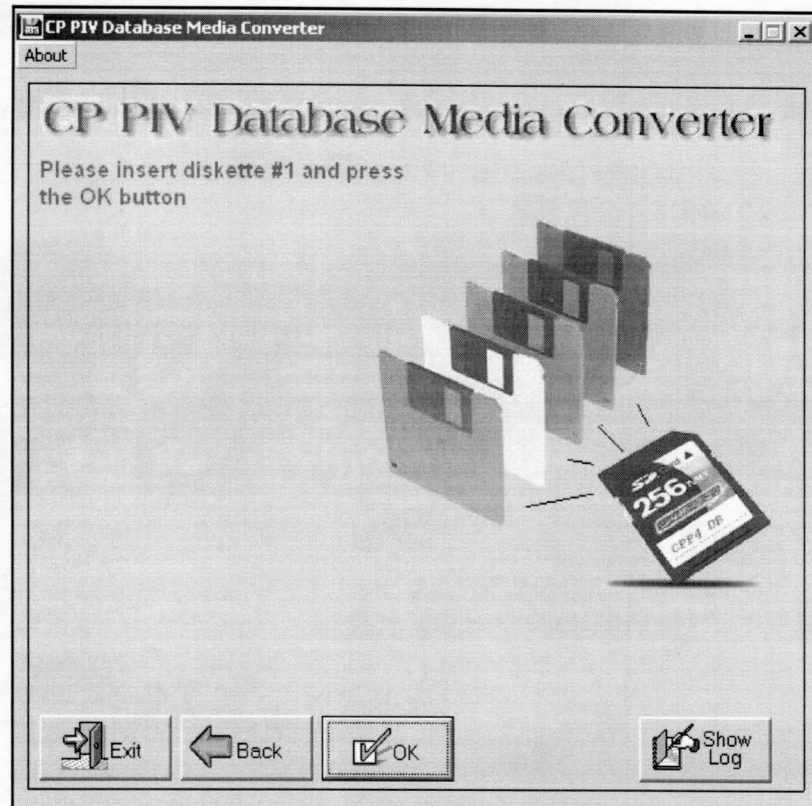
- 1 Insert the floppy disk containing the backed up customer database from Procedure 351 on page 1210.
- 2 Insert a CF card (there is one included in the Software Install Kit) into the CF reader or PCMCIA CF adaptor.
- 3 Start the Database Media Converter utility. The first screen (Figure 291 on page 1215) prompts you to select the correct drive letter for the floppy disk drive.

Figure 291
Select the floppy disk drive



- 4 The utility then prompts you to insert the floppy disk (diskette 1) and click OK (see Figure 292 on page 1216).

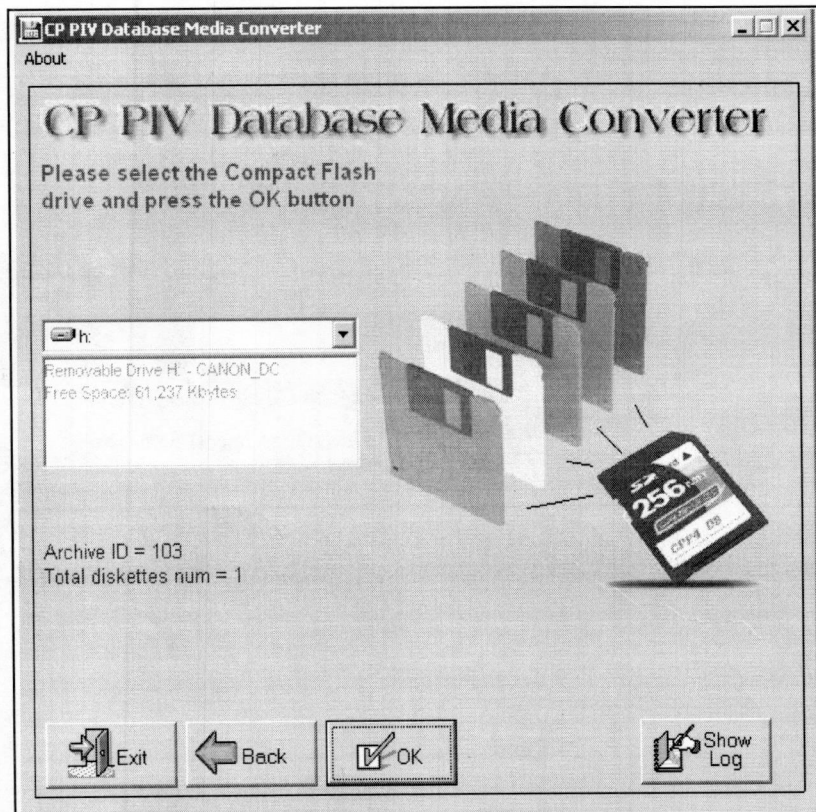
Figure 292
Insert diskette 1



- 5 After verifying the database on the floppy disk, the utility prompts you to select the CF drive (see Figure 293 on page 1217).

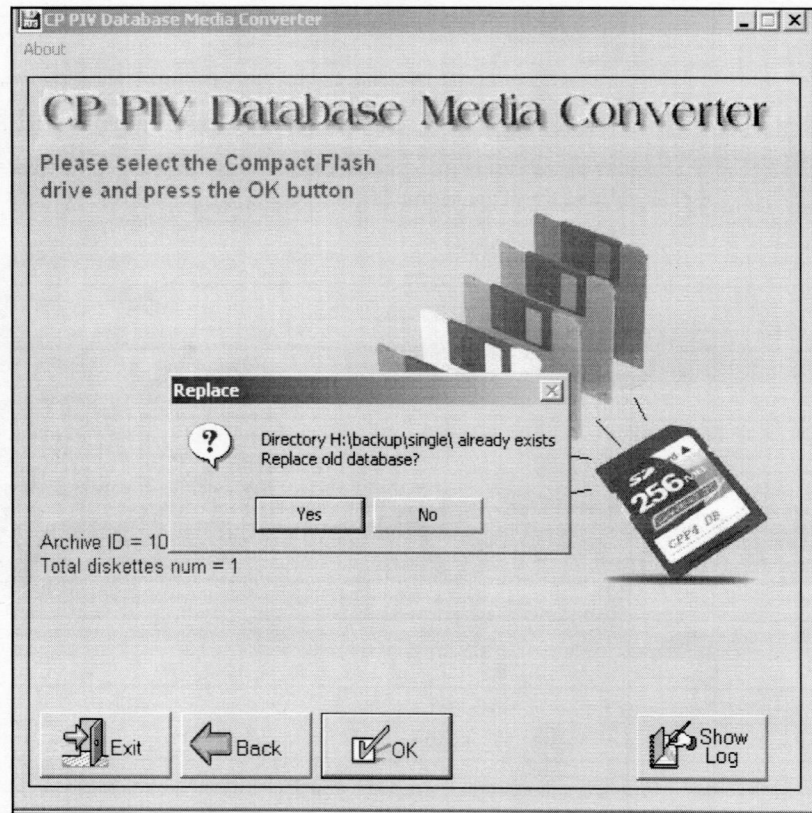
Note: if the database is on more than 1 floppy, the utility prompts you to insert the next floppy until the entire database is read.

Figure 293
Select the CF drive



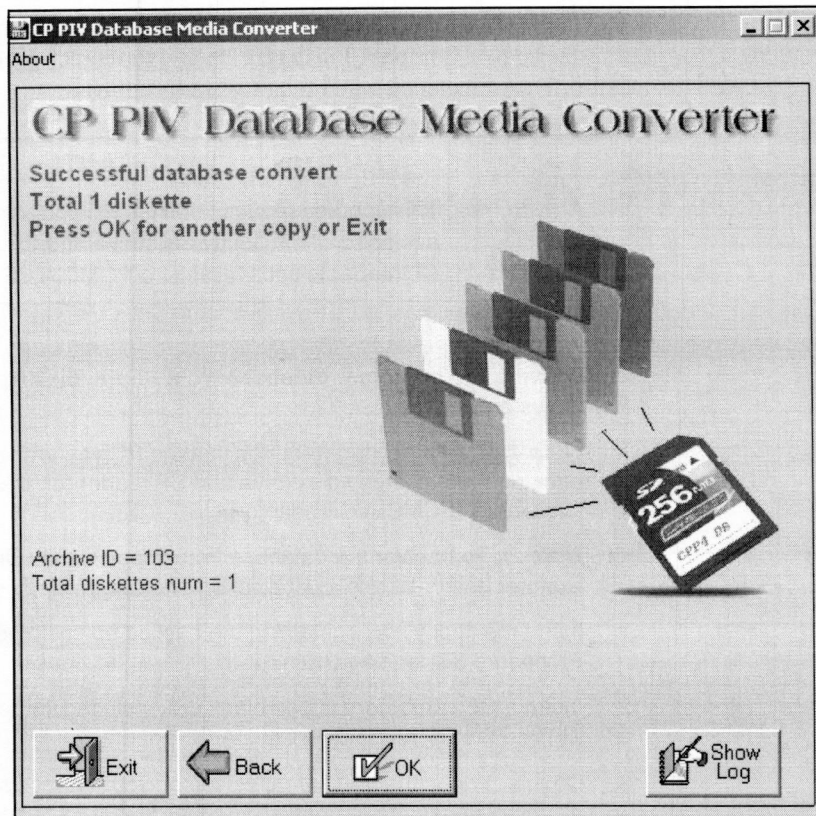
- 6 At this point, 2 options are available:
- a. If the CF card already contains a previously backed-up database, a dialog box appears (see Figure 294 on page 1218). Click yes to replace old database.
 - b. If the CF card is blank, the database is backed up to the CF card.

Figure 294
Replace database on CF drive



- 7 The utility completes the transfer to CF and prompts you to copy another or EXIT.

Figure 295
Copy another or exit



End of Procedure

Transferring the database from floppy disk to CF (Windows explorer)

The floppy disk that contains the backed up customer database needs to be transferred to a **Compact Flash (CF)** card. Nortel recommends using the extra CF card included with the Software Install Kit.



IMPORTANT!

This upgrade requires that the PC you are working from is equipped with a floppy disk drive and CF reader (or, if a CF reader is not available, a PCMCIA CF adaptor).

Procedure 355 •

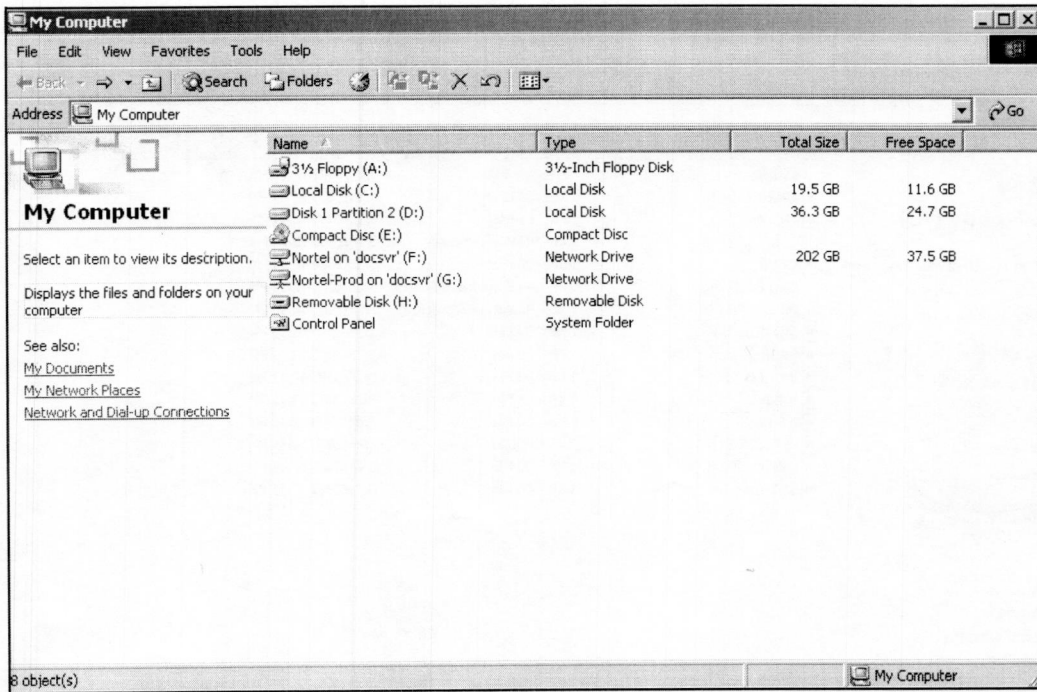
Transferring the customer database from floppy disk to CF (Windows explorer)

Note 1: This procedure requires that the PC you are working from is equipped with a floppy disk drive and CF reader (or, if a CF reader is not available, a PCMCIA CF adaptor).

Note 2: To transfer the database from floppy disk to CF using Windows explorer, the database must exist on one single floppy disk.

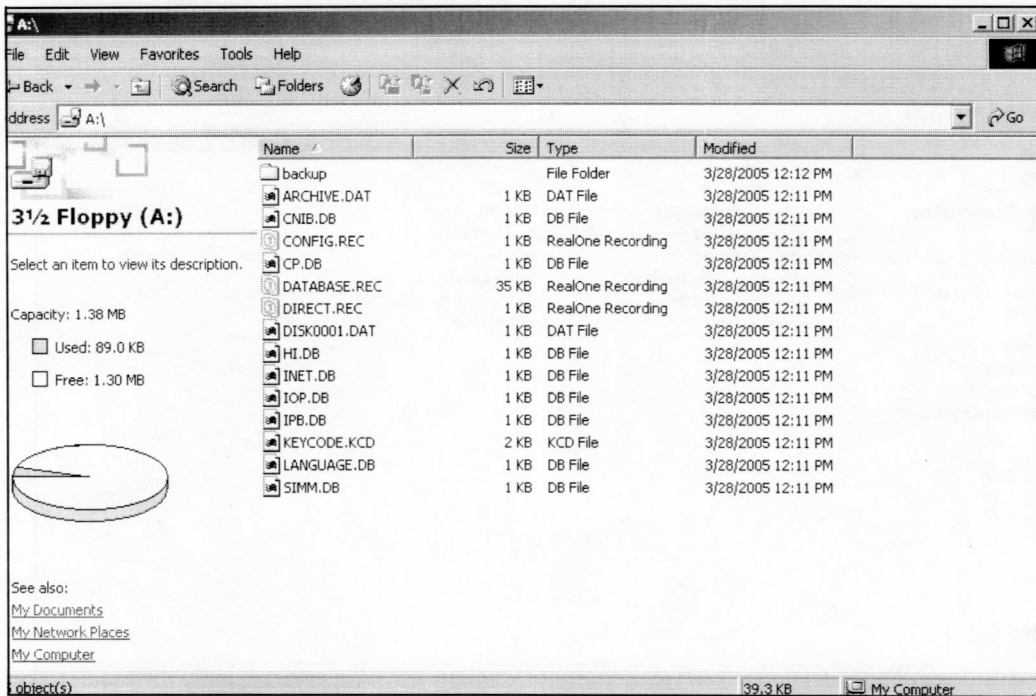
- 1 Insert the floppy disk containing the backed up customer database from Procedure 351 on page 1210.
- 2 Insert a CF card (there is one blank disk included in the Software Install Kit) into the CF reader or PCMCIA CF adapter.
- 3 Double click on the My Computer icon on your Windows desktop. A list of all drives on your PC appears. See Figure 296 on page 1221.

Figure 296
My Computer



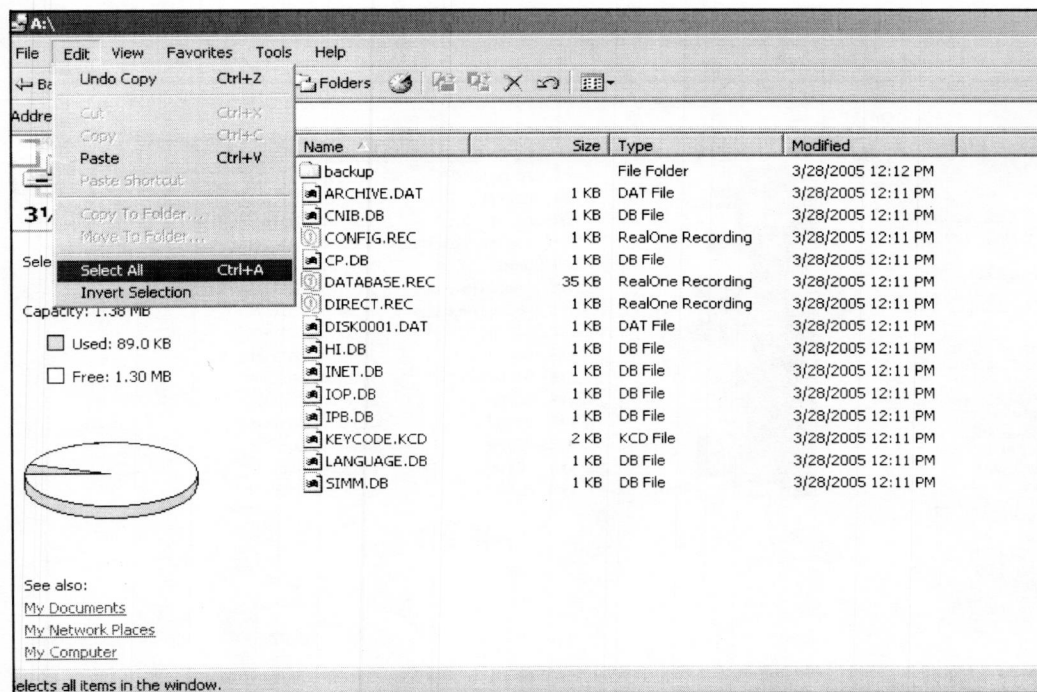
- 4 Double click on the 3 1/2 Floppy icon to list the contents of the floppy disk. See Figure 297 on page 1222.

Figure 297
Floppy Disk contents



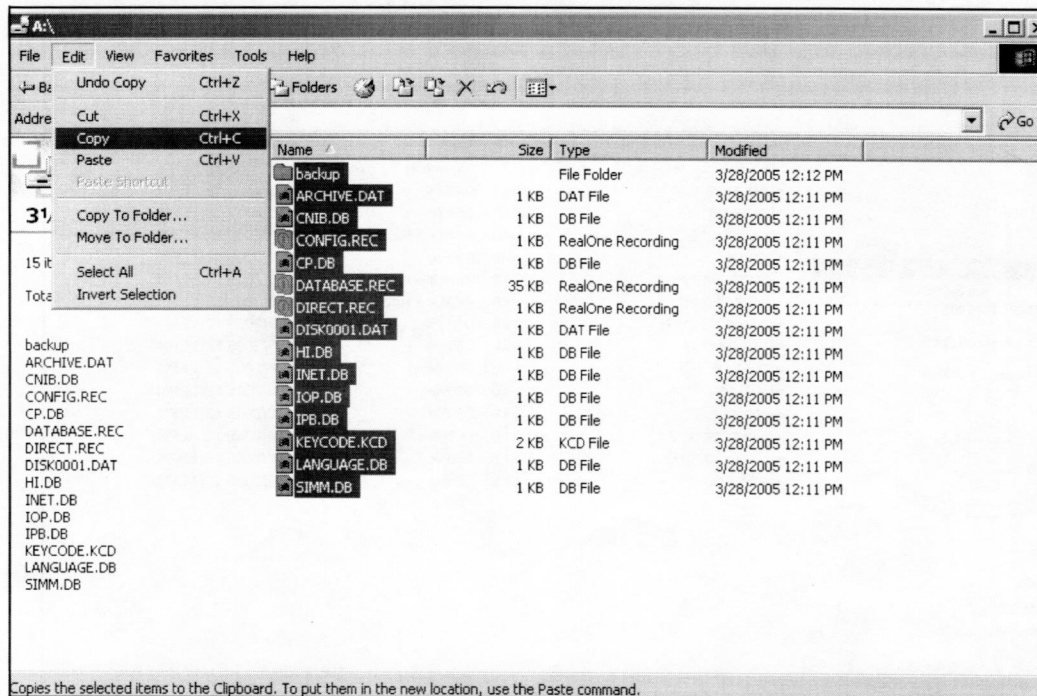
5 Choose **Edit, Select All** See Figure 298 on page 1223.

Figure 298
Edit, Select All



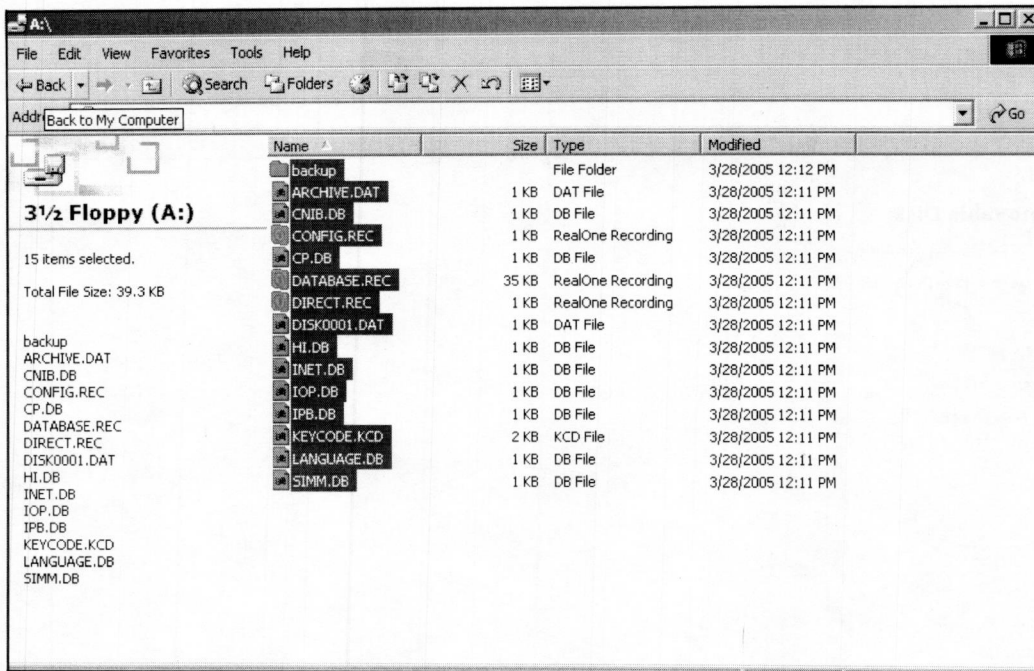
6 Choose **Edit, Copy** See Figure 299 on page 1224.

Figure 299
Edit, Copy



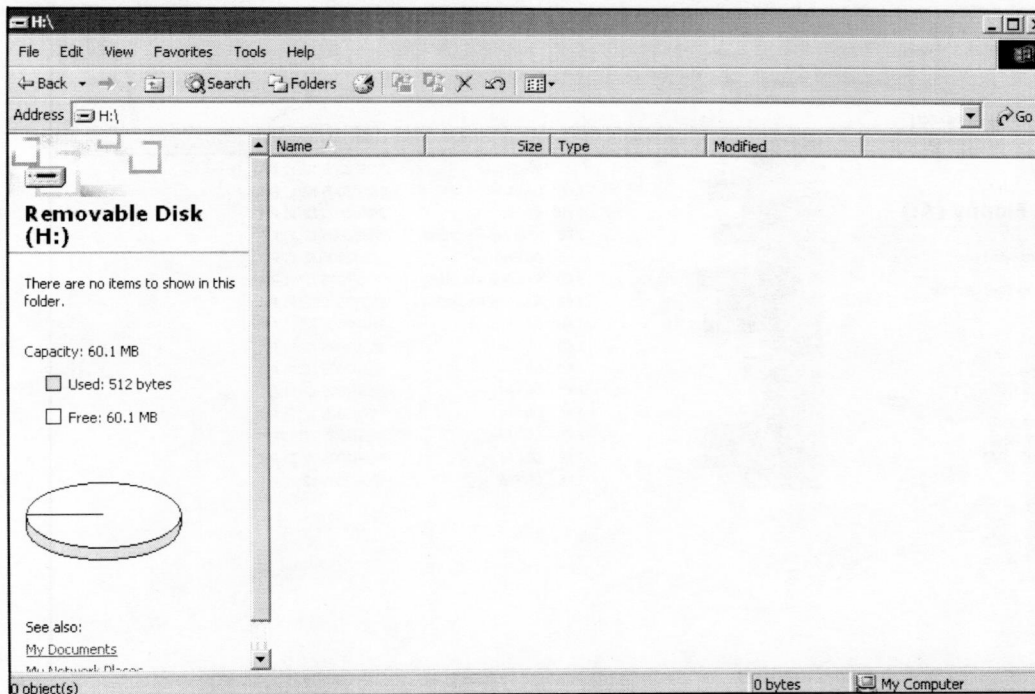
- 7 Click on the Back button in the upper left hand corner (see Figure 300 on page 1225). This returns you to your original My Computer window.

Figure 300
Back button



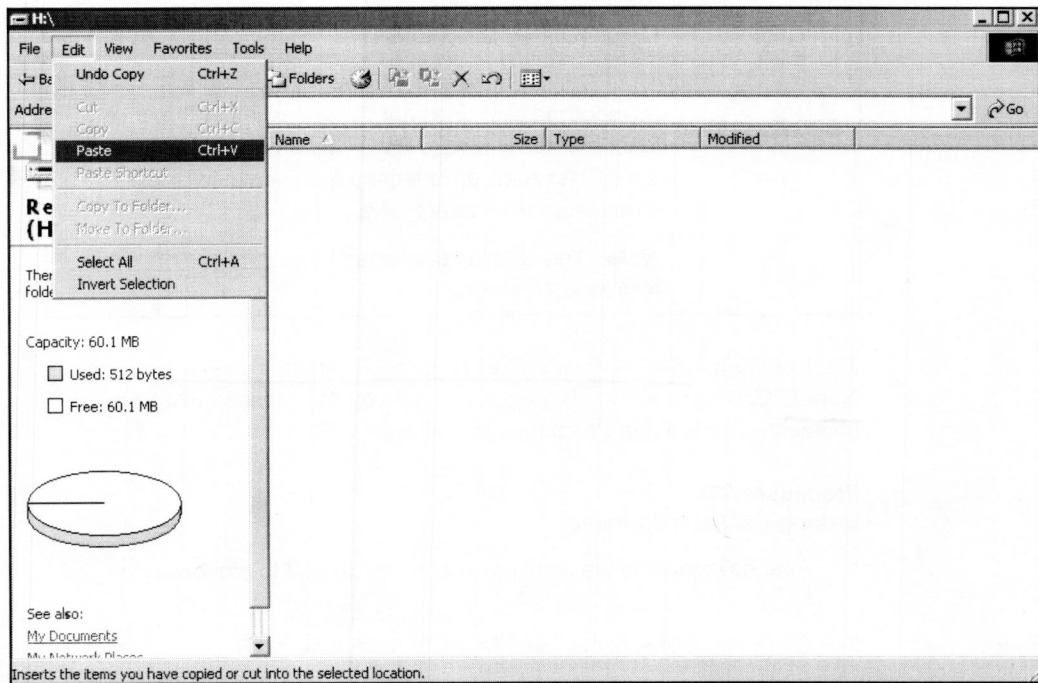
- 8 Double click on the Removable Disk (X:) icon. This lists the contents of the CF card. The CF card should be blank. See Figure 301 on page 1226.

Figure 301
Contents of the CF card



- 9 Choose **Edit, Paste**. All files are transferred to the CF card. See Figure 302 on page 1227.

Figure 302
Edit, Paste



- 10 All files are still retained on the original floppy disk. Remove the floppy disk and store in a safe place for future reference.

End of Procedure

Making the RMD bootable



CAUTION — Data Loss

The PC utility used in the following procedure (mkbootrmd.exe) does not validate whether the drive letter entered is a valid RMD CF card. You must enter the correct RMD drive letter when prompted or risk formatting the incorrect drive.

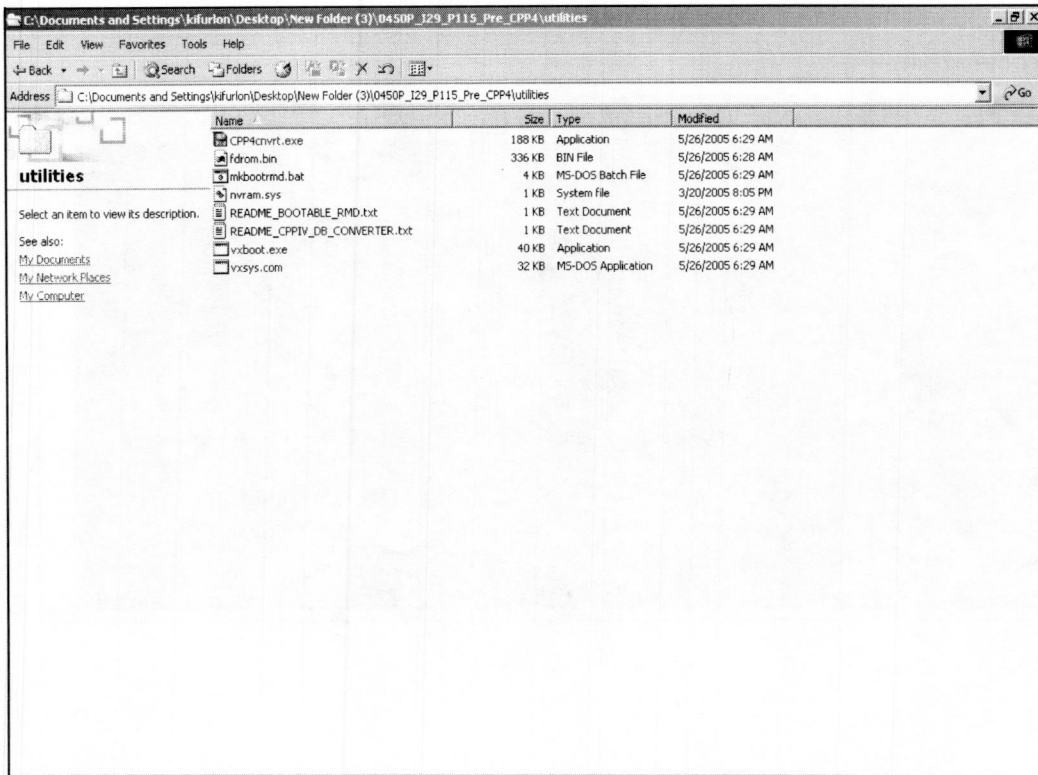
Note: This utility is supported by all versions of Microsoft Windows.

The installation RMD CF card must come pre-formatted and bootable from Nortel. Consumer CF cards are not bootable by default and must be made bootable as outlined in Procedure 356 on page 1228.

Procedure 356 **Making the RMD bootable**

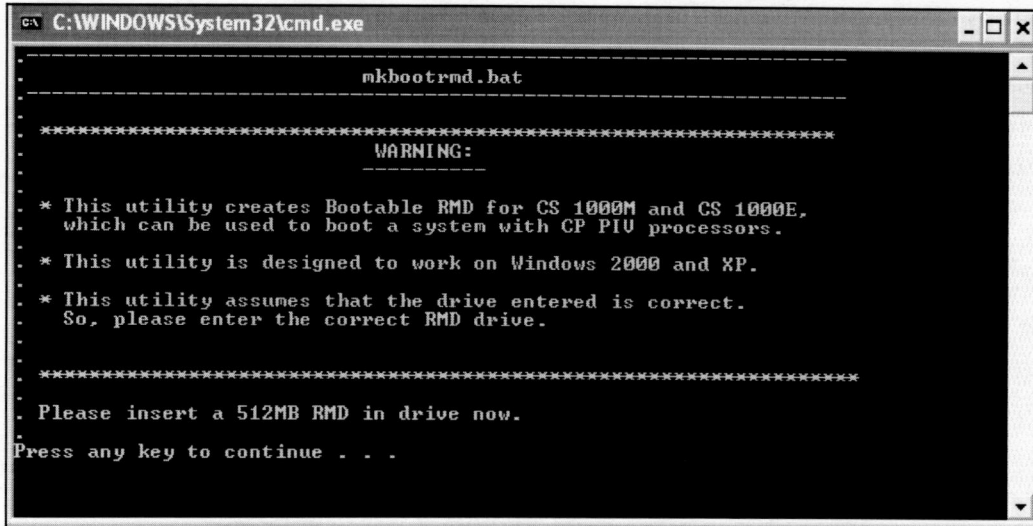
- 1 After downloading the software image file, unzip it to a directory on your PC.
- 2 Open the utilities folder. See Figure 303 on page 1229

Figure 303
Utilities folder



- 3 Double click the mkbootrmd.bat file. Insert a blank 512 MByte CF card (see Figure 304).

Figure 304
mkbootrmd.bat



```
C:\WINDOWS\System32\cmd.exe
mkbootrmd.bat

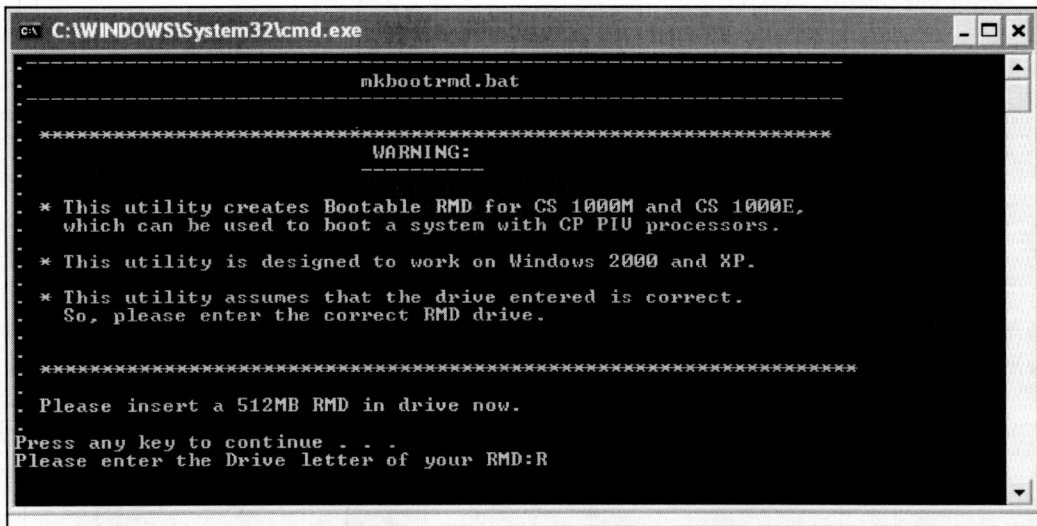
*****
WARNING:
*****

* This utility creates Bootable RMD for CS 1000M and CS 1000E,
  which can be used to boot a system with CP PIU processors.
* This utility is designed to work on Windows 2000 and XP.
* This utility assumes that the drive entered is correct.
  So, please enter the correct RMD drive.
*****

Please insert a 512MB RMD in drive now.
Press any key to continue . . .
```

- 4 Enter the correct drive letter of the RMD (see Figure 305).

Figure 305
mkbootrmd.bat



```
C:\WINDOWS\System32\cmd.exe
mkbootrmd.bat

*****
WARNING:
*****

* This utility creates Bootable RMD for CS 1000M and CS 1000E,
  which can be used to boot a system with CP PIU processors.
* This utility is designed to work on Windows 2000 and XP.
* This utility assumes that the drive entered is correct.
  So, please enter the correct RMD drive.
*****

Please insert a 512MB RMD in drive now.
Press any key to continue . . .
Please enter the Drive letter of your RMD:R
```


- 5 The boot sector files (bootrom.sys and nvram.sys) are successfully copied making the CF card bootable (see Figure 306).

Figure 306
boot sector successfully installed



```
C:\WINDOWS\System32\cmd.exe
. Boot sector Successfull installed ...
. Copying files . . .
. bootrom.sys copied OK.
. Check whether the follwoing output shows
. "All the specified files are contiguous"
.
The type of the file system is FAT32.
Volume CS1000BOOT created 4/20/2005 1:40 PM
Windows is verifying files and folders...
File and folder verification is complete.
Windows has checked the file system and found no problems.

  63,074,304 bytes total disk space.
    340,480 bytes in 1 files.
  62,733,312 bytes available on disk.

    512 bytes in each allocation unit.
   123,192 total allocation units on disk.
   122,526 allocation units available on disk.
All specified files are contiguous.
```

End of Procedure

Identify two unique IP addresses

Each CP PIV system must be configured with two unique IP addresses for LAN identification and communication. One IP address is defined for the *active* Core. The second IP address is defined for the *inactive* Core. In this configuration, the *active* Core (either Core 0 or Core 1) that handles call processing is always identified by the same IP address.

- Contact your System Administrator to identify two unique IP addresses before the upgrade.
- For instructions to configure these IP numbers, see "Configuring IP addresses" on page 1285.

Perform upgrade

Check software received

Compact Flash Software Install Kit (CP PIV)

The Compact Flash Software Install Kit contains the following items:

- One CF (512 MByte) card containing:
 - Install Software files
 - CS 1000 Release 4.5 software
 - Dep. Lists (PEPs)
 - Key code File
- One blank CF card for database backup
- One Nortel CS 1000 Release 4.5 Documentation CD

*Communication Server 1000
RLS 4.5*

*→ Compact Flash 128 MB with NT
label*

* Check equipment received

This section describes the *minimum* equipment required for CP PIV. Additional equipment can also be installed during the upgrade. Verify that *all* equipment has been received.

Meridian 1 Option 61C CP PIV equipment is configured at the factory according to customer requirements. Some cards and power supplies are shipped in separate packages to prevent damage to cards.

Before the upgrade, check that equipment on the order form is also on the packing slip. Check that all equipment has been received. If any items are missing, contact your supplier for replacements before you begin the upgrade.



WARNING

Service Interruption

DO NOT proceed with the upgrade if any of the required equipment is missing. All equipment must be received to complete the upgrade.

Check vintage requirements for existing hardware

Make sure that existing hardware meets the following minimum vintage requirements for CP PIV:

- The NT4N65 cCNI card must be minimum vintage of AC ✓
- The NT4N48 System Utility card must be minimum vintage AA ✓ BA
- The QPC441 3-Port Extender (3PE) cards must be minimum vintage F. ✓
- The NTRB53 Clock Controller cards must be minimum vintage AA. N/A
- The existing QPC471 Clock Controller cards must be minimum vintage H or the QPC775 Clock Controller cards (all countries except USA) must be minimum vintage E. ✓ F
- NT6D41CA (DC) Power Supply ✓
- NT8D29BA (AC) Power Supply N/A
- The QPC43 Peripheral Signaling cards must be minimum vintage R. ✓

If any equipment does not meet these requirements, replace the equipment before you begin the upgrade.



CAUTION — Service Interruption

Service Interruption

Equipment that does not meet the minimum vintage requirements will cause system malfunctions and loss of call processing.



WARNING

Clock Controller cards must be of the same part number for any single system. For instance, a QPC471 card cannot be used with an NTRB53 card.

N/A

Check required hardware (AC and DC)

Table 154 on page 1235 lists the equipment required for DC-powered systems. Table 155 on page 1236 lists the equipment required for AC-powered systems.



WARNING

Ensure that power supplies NT6D41CA (DC) or NT8D29BA (AC) are used in the Core/Net shelf.

Table 154
DC requirements for Meridian 1 Option 61C CP PIV system

Order number	Description	Quantity per system
NTHU44DA	Option 61C Single Group Base Package (DC)	1

N/A

Table 155
AC requirements for Meridian 1 Option 61C CP PIV system

Order number	Description	Quantity per system
NTHU44AA	Option 61C Single Group Base Package (AC)	1

The equipment room must provide the appropriate number of 30 Ampere outlets. One 175-264 Vac, 47-63 Hz, 30 Ampere outlet is required for every pedestal or column.

If supporting additional Meridian 1 modules, order additional top cap & pedestal packages (NTWB15BA). One top cap and pedestal package supports up to 4 modules.

To cover all exposed module sides and to connect modules side-to-side, additional NT9D18AA module side covers and NT8D49AA column spacer kits must be ordered separately.

The NTHU44AA and DA packages contain common equipment hardware only, including two CP PIV Pentium call processor cards and two NTRB53 Clock Controller cards.

These packages are designed for computer floor installation, with all cables exiting from the pedestal. If the installation requires overhead cabling, order NT7D0009 top egress panel, one per column.

An NT8D49AA Spacer kit is provided to allow for a side-by-side installation of core/network modules. This arrangement will require an additional top cap and pedestal package and must be ordered separately.

Intelligent peripheral equipment must be ordered separately. Order NTWB15DA for any additional AC IPE Modules required.

Peripheral equipment (PE) or Enhanced peripheral equipment (EPE) is not supported on systems with Pentium Processors.

Check personnel requirements

Nortel recommends that a minimum of two people perform the card cage upgrade.

Database requirements

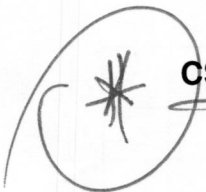
If the system is running pre-release 19 software or the source platform is a Meridian 1 Option 21E, 51, 61, 71, STE, NT or XT, the database must be sent to Nortel for conversion.

System requirements



IMPORTANT!

Systems and components delivered to customer sites may include pre-installed software. However, the pre-installed software versions are typically older and are included only for manufacturing and order management purposes. **Do not attempt to operate the system with the pre-installed software.** The latest software must be downloaded from the Nortel Software Downloads web site and installed as part of the upgrade process.



CS 1000 compatibility

Consult *Communication Server 1000M and Meridian 1: Large System Planning and Engineering* (553-3021-120) for CS 1000 Release 4.5 product compatibility.

Install Core 1 hardware

Procedure 357

Checking main Core card installation

The main Core cards are installed in the factory as shown in Figure 307 on page 1239:

- 1 NT4N65AC CP Core Network Interface (cCNI) cards:
Each system contains one NT4N65 cCNI card per Core/Net module. The cCNI cards are located in slot c9. If not already installed, install a P0605337 CP Card Slot Filler Panel to cover slots c10-c12, which do not contain cCNIs.

Note: In the NT4N41 Core/Net module, port 0 on the NT4N65 Core to Network Interface (cCNI) Card in slot c9 must be configured as "group 0." The cCNI and 3PE cards for group 0 communicate through the NT4N29 cable. Only one cCNI card is required for group 0 in a Meridian 1 Option 61C CP PIV.

*Requires
CNI to 3PE*

- 2 Slots c13 and c14 are left empty. If not already installed, install a P0605337 CP Card Slot Filler Panel in each slot.
- 3 NT4N48 System Utility (Sys Util) card is located in slot c15. Check side ID switch settings for SU card in Core/Net 1 according to Table 156.

Table 156

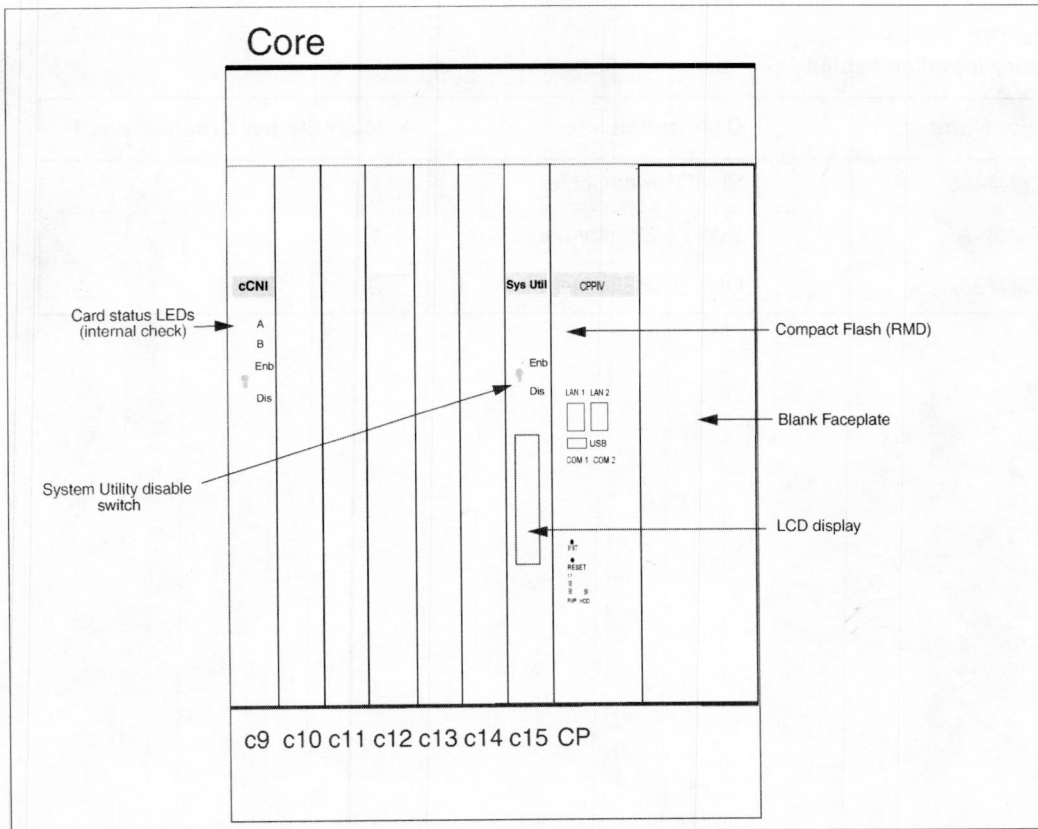
Core module ID switch settings (System Utility card)

	Position 1	Position 2
Core 0	On	On
Core 1	Off	On

- 4 NT4N39 CP PIV is located in the Call Processor slot.
- 5 The N0026096 blank faceplate is located in the extreme right-hand slot next to the CP PIV card.

End of Procedure

Figure 307
Core card placement in the NT4N41 Core/Net Module (front)



Check for the shelf power cable

Check that the NT4N4405 Shelf Power Cable is installed in the CP card cage backplane. See Figure 308 on page 1241 for cable location.

Check factory-installed cables

Table 110 lists factory-installed cables.

Table 157
Factory-installed cables

Order Number	Description	Quantity per Core/Net shelf
NT4N4405	Shelf Power Cable	1
NT4N89AA	System Monitor cable	1
NT4N29AA	CNI to 3PE cable	2

05/



Disable and remove equipment from Core 1

Procedure 358

Checking that Core 0 is active

To upgrade Core 1, verify that Core 0 is the active side performing call processing:

- 1 Verify that Core 0 is active.

LD 135 Load program

STAT CPU Get the status of the CPUs

- 2 If Core 1 is active, make Core 0 active:

SCPU Switch to Core 0 (if necessary)

******** Exit program

End of Procedure

Procedure 359

Checking that Clock Controller 0 is active

- 1 Check the status of the Clock Controllers:

LD 60 Load program

SSCK 0 Get the status of Clock Controller 0

SSCK 1 Get the status of Clock Controller 1

- 2 If Clock Controller 1 is active, switch to Clock Controller 0.

SWCK Switch to Clock Controller 0 (if necessary)

DIS CC 1 Disable Clock Controller 1

******** Exit program

- 3 Faceplate-disable Clock Controller 1.

End of Procedure

Procedure 360
Splitting the Cores

- 1** In Core 0, set the NORM/MAINT switch on the Call Processor card to MAINT.
- 2** In Core 1, set the ENB/DIS switch on the NT6D65 cCNI card to DIS.
- 3** In Core 1, set the NORM/MAINT switch on the Call Processor card to MAINT.

End of Procedure



The system is now in split mode, with call processing on Core 0.

Software disable Network cards in Core/Net 1 from Core/Net 0



CAUTION — Service Interruption

Service Interruption

At this point, the upgrade interrupts service.

Procedure 361

Software disabling cards in network slots of Core/Net 1 from Core/Net 0

- 1 In Core/Net 1 only, software disable all network and I/O cards such as XNET, TTY, Conf/TDS and ISDN cards:

- a. In Core/Net 1 only, disable XNET.

LD 32 Load program

DISL sl sl = the superloop number of the XNET card

******** Exit program

- b. In Core/Net 1 only, disable ENET.

LD 32 Load program

DISL X X= the loop number of the ENET card

******** Exit program



CAUTION — Service Interruption

Service Interruption

If the system terminal is assigned to an SDI port that you are disabling, assign it to another port before you disable the SDI.

c. In Core/Net 1 only, software disable each port on the SDI cards:

LD 37 Load program

DIS TTY x x = the number of the interface device attached to a port

**** Exit program

d. In Core/Net 1 only, disable DTI cards.

LD 60 Load program

DISL x x = the loop number of the DTI port

**** Exit program

e. In Core/Net 1 only, disable PRI cards.

LD 60 Load program

DISL x x = the loop number PRI port

**** Exit program

f. In Core/Net 1 only, disable MSDL cards.

LD 48 Load program

DIS MSDL x x = the MSDL card number. System will respond with group 0

**** Exit program

g. In Core/Net 1 only, disable XCT cards.

LD 34 Load program

DISX x x = the superloop number of the XCT card (

**** Exit program

- 2 In Core/Net 1 only, software disable the QPC43 Peripheral Signaling Card:

LD 32 Load program

DSPS x Table 111 lists Peripheral Signaling Card values for "x"

******** Exit program

Table 158
Peripheral Signaling Card numbers

Group/ shelf	Peripheral Signaling Card	Loops disabled/enabled		
0 / 0	0	0	–	15
0 / 1	1	16	–	31

- 3 In Core/Net 1 only, faceplate-disable the 3PE, Per Sig and all network cards.

End of Procedure



CAUTION — Service Interruption

Service Interruption

The system can shut down if the system monitors are not removed. Remove the monitors and keep the cooling fans ON.

Procedure 362

Removing the system monitors from the Core column

Note: Perform the following procedure for both AC and DC systems

- 1 In Core 0, software disable the master system monitor (NT8D22):

LD 37 Load program

DIS TTY # Disable the master system monitor TTY interface

- 2 Remove J3 and J4 cables on Core 0 system monitor.

Note: Do *not* turn off the blower units in the front of the pedestals

- 3 Remove the system monitor from the rear of the pedestal on Core 0.

End of Procedure

Power down Core/Net 1



CAUTION — Service Interruption

Service Interruption

Call processing is interrupted for approximately 60 minutes while the procedures are completed.



DANGER OF ELECTRIC SHOCK

In a DC-powered system, power to the column can remain on during the following procedures. In an AC-powered system, however, power to the entire column *must* be shut down throughout the procedures.

For AC-powered systems: set the MPDU circuit breaker located at the left end of the module to OFF (down position).

For DC-powered systems: set the breaker for the Core 1 module in the back of the column pedestal to OFF (down position).

Procedure 363

Removing Core 1 cables and card cage

- 1 Label and disconnect the Clock Controller 1.
 - a. Disconnect the NT8D76AC cable from the Clock Controller 1 faceplate card.
 - b. If primary and secondary clock reference cables are connected to the Clock Controller 1 faceplate, disconnect them last.
- 2 Label and disconnect all cables from the front of the module.
- 3 Tape over the contacts to avoid grounding.
- 4 Tie all cables to the sides so the working area in front of the card cage is totally clear.
- 5 Remove the I/O safety panel by turning the screws on each side. Set the I/O safety panel aside.
- 6 Tag and disconnect all cables from the backplane to the interior of the I/O assembly.
- 7 Tag and disconnect all plugs, wires, and cables to the backplane.

Note 1: Leave the network cards in the card cage. You will relocate them to the CP card cage later in the upgrade procedure.

Note 2: Two people are needed to remove the Core card cage because of the weight of the card cage with the cards left installed.

- 8 Use a 1/4" nut driver to remove the two mounting screws at the bottom rear of the card cage. The screws secure the card cage to the module casting. Keep the screws for use with the CP card cage.



CAUTION — Service Interruption

Do not drop the mounting screws into the pedestal.
Doing so can cause serious damage.

- 9 Remove the front trim panels on both sides of the card cage.
- 10 Remove the three mounting screws that secure the front of the card cage to the bottom of the module. Keep the screws for use with the CP card cage.
- 11 Pull the card cage forward until it is halfway out of the module.

- 12 Disconnect cables, plugs, and wires from the rear of the module to the backplane.
- 13 Remove the logic return (LTRN) (orange) wire from the backplane bolt. Be careful; do not drop the nut or lock washer into the pedestal. See Figure 309 for DC power connectors. See Figure 310 on page 1250 for AC power connectors.

Figure 309
DC power connectors on the Core module backplane

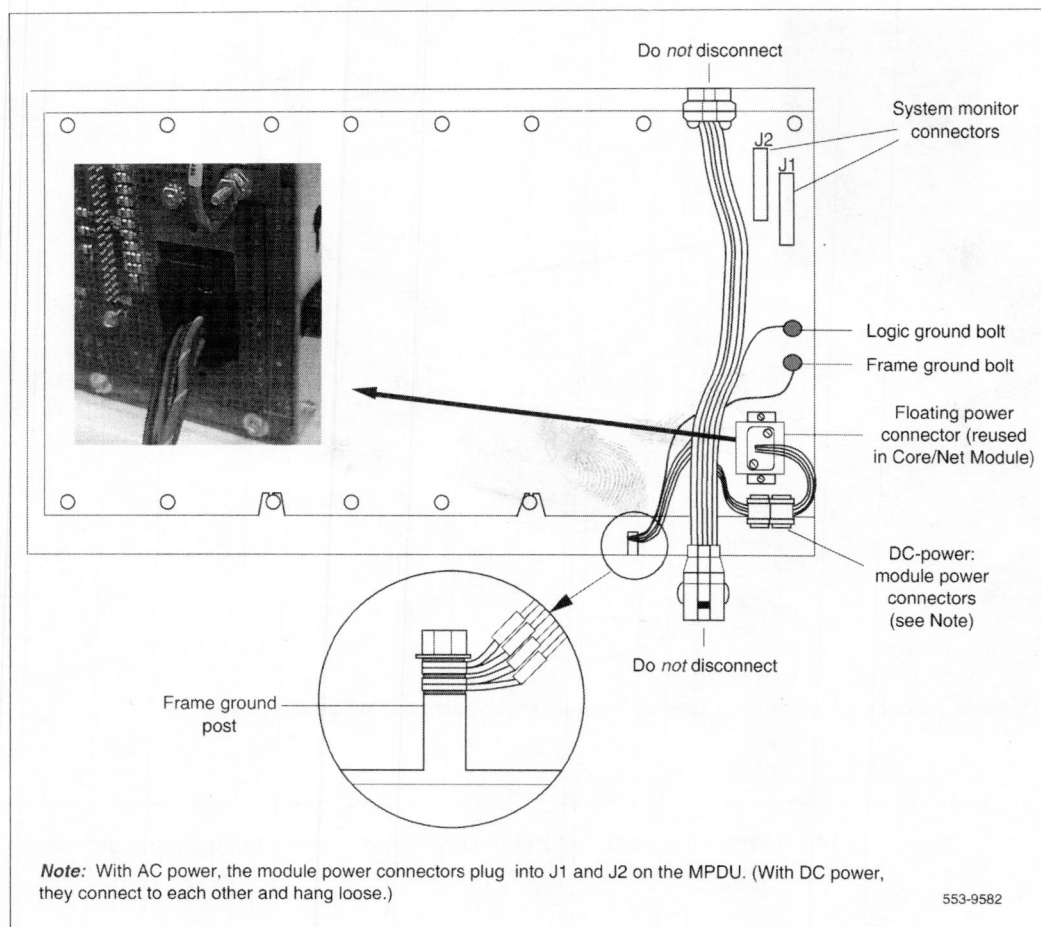
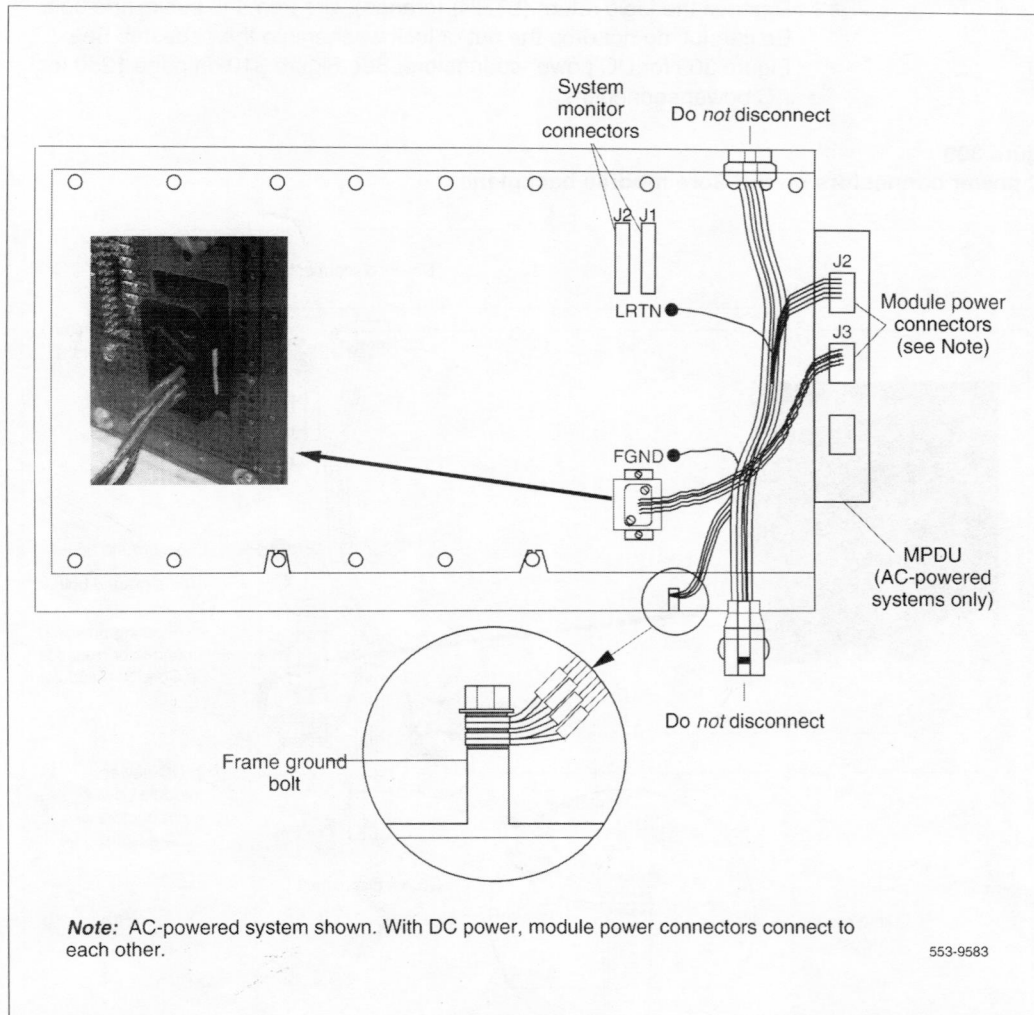


Figure 310
AC power connectors on the Core module backplane



- 14** Remove the frame ground (FGND) (green) wire from the frame ground bolt on the module.

- 15 Label and disconnect the module power connectors. In an AC-powered system, these are small orange connectors plugged into the module power distribution unit (MPDU). In a DC-powered system, these are connected to each other.
- 16 Label and disconnect the system monitor ribbon cables to J1 and J2.
- 17 Remove the Core card cage from the module.
- 18 Remove the power harness and reserve it for reinstallation when you install the NT4N40 card cage. The power harness is located at the right rear lower corner and plugs into the rear of the power supply. For AC systems, relocate power harness NT8D40. For DC systems, relocate power harness NT7D11.
- 19 Reposition the EMI shield (it looks like a brass grill) in the base of the module. Tape over the front mounting tabs to hold the shield in position. You will remove the tape later.



CAUTION — Service Interruption

Service Interruption

If you do not tape the EMI shield in position, you will not be able to install the card cage in the module correctly.



CAUTION — Service Interruption

Damage to Equipment

Check for and remove any debris (such as screws) that fell into the base of the UEM module.

End of Procedure

Procedure 364
Installing the CP card cage in Core 1



- 1 Check that the card cage is configured as Core 1. See Table 159 for instructions.



IMPORTANT!

An NT4N41 Core/Net module with pedestal, top cap and necessary cables should already have been installed. If so, proceed to "Relocating Network cards to CP PIV Core 1" on page 1256.

Table 159
Core module ID switch settings (System Utility card)

	Position 1	Position 2
Core/Net 0	On	On
Core/Net 1	Off	On

- 2 For AC-powered systems only, attach the new MPDU, part of the CP PIV Upgrade kit, to the side on the NT4N40 card cage. The screws that secure the MPDU are accessible from the power supply slot. See Figure 311 on page 1253.

Note: Pre-thread 2 bottom mounting screws at the back of the Core/Net shelf. Check that the power harness at the right rear corner of the card cage has been transferred from the old card cage to the CP card cage.

- 3 Slide the CP card cage halfway into the module.
- 4 Hold the card cage firmly and make the following connections at the rear of the module.
 - a. In AC-powered systems, connect the remaining module power connectors to J2 on the MPDU. Then plug the module power cable

} N/A

} N/A

(the short harness attached to the module power connector) into connector J3 on the MPDU (attached to the side of the card cage). } N/A

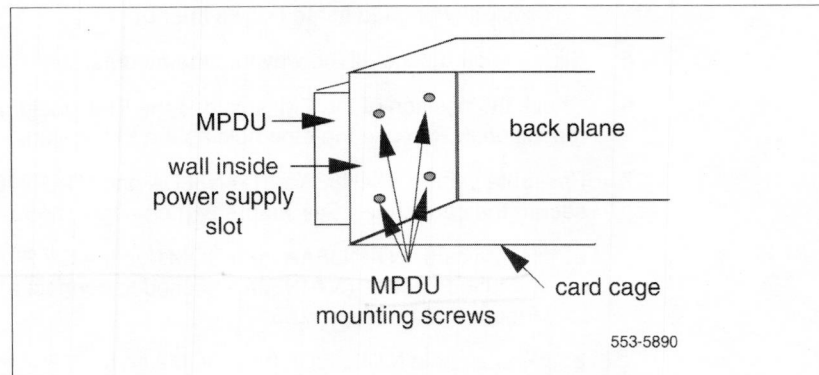


CAUTION — Service Interruption

Damage to Equipment

Check for and remove any debris (such as screws) that may have fallen into the base of the UEM module.

Figure 311
Location of the screws for the MPDU



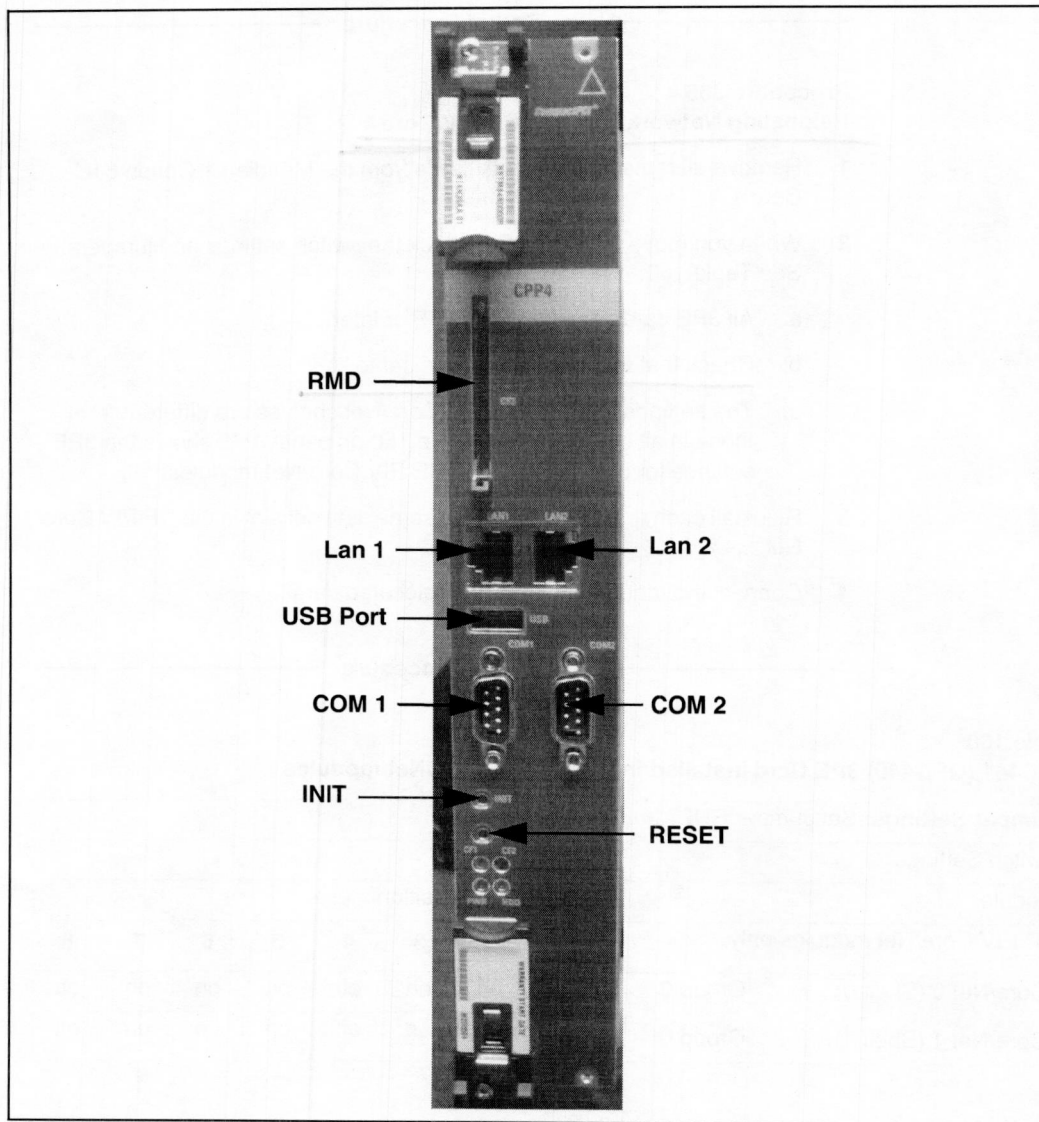
- b. In DC-powered systems, connect the module power connectors to each other.
- c. Attach the system monitor ribbon cables:
 - i. Connect the ribbon cable that goes down to the column to connector J1 on the backplane.
 - ii. Connect the ribbon cable that goes up the column to J2 on the backplane.

- d. Use a 11/32" socket wrench to attach the green ground wire to the frame ground bolt on the module. Remove the nut and the lock washer at the top of the bolt. Put the frame ground wire terminal over the bolt. Reinstall the top lock washer and the nut, then tighten down the nut.

Note: For all of the wire terminals to fit on the bolt, remove one of the lock washers. Leave the first lock washer at the bottom of the bolt and a second at the top of the bolt. Leave a third lock washer between the second and third, or the third and fourth, wire terminals.

- e. Attach the orange logic return wire. Remove one nut and the lock washer from the LRTN bolt at the rear of the card cage. Put the wire terminal over the bolt, reinstall the lock washer and nut. Use a 1/4" socket wrench to tighten down the nut.
- 5 Slide the card cage all the way into the module.
 - 6 Check the position of the EMI shield. If the EMI shield has shifted, reposition it. Remove the tape holding the EMI shield.
 - 7 Pre-route cables NT4N88AA, NT4N88BA and NT4N90BA before you secure the card cage. (See Figure 312 on page 1255.)
 - a. Route cable NT4N88AA from COM1 on the CP PIV faceplate to J25 on the I/O panel. (NT4N88AA is used to connect a terminal.) See Figure 312 on page 1255.
 - b. Route cable NT4N88BA from COM2 on the CP PIV faceplate to J21 on the I/O panel. (NT4N88BA is used to connect a modem.) See Figure 312 on page 1255.
 - c. Route cable NT4N90BA from LAN 1 on the CP PIV faceplate to J31 (top) of the I/O panel. See Figure 312 on page 1255.

Figure 312
CP PIV call processor card (front)



- 8 At this point, do not connect the NTRC17BA crossover ethernet cable.

End of Procedure

Procedure 365

Relocating Network cards to CP PIV Core 1

- 1 Remove all remaining network cards from the Meridian 1 Option 61C Core 1.
- 2 When you move the 3PE card, check the switch settings and jumpers. See Table 160.
 - a. All 3PE cards must be vintage F or later.
 - b. Check that the RN27 Jumper is set to "A".
 - c. The settings for 3PE cards in Core/Net shelves are different from those in all other shelves: Table 160 on page 1256 shows the 3PE settings for cards installed in CP PIV Core/Net modules.
- 3 Reinstall each removed card in the same network slot in the CP PIV Core/Net 1.
- 4 Connect the tagged cables to the relocated cards.

End of Procedure

Table 160

QPC441 (QPC440) 3PE Card installed in the CP PIV Core/Net modules

Jumper Settings: Set Jumper RN27 at E35 to "A".									
Switch Settings									
Module		D20 switch position							
CP PIV Core/Net modules only		1	2	3	4	5	6	7	8
Core/Net 0 (Shelf 0)	Group 0	off	on	on	off	on	on	on	on
Core/Net 1 (Shelf 1)	Group 0	off	on	on	off	on	on	on	off

Procedure 366

Moving Clock Controller 1

- 1 Remove Clock Controller 1 from the Core module.
- 2 Set the Clock Controller 1 switch settings according to Table 161 on page 1258 and Table 162 on page 1259.
- 3 Move Clock Controller 1 to the CP PIV Core/Net 1, slot 9.
DO NOT seat Clock Controller 1 and DO NOT enable the card.
- 4 Reconnect all primary and secondary reference cables.

} rotular cables

- 5 Do NOT connect the clock to clock cable.



CAUTION — Service Interruption

Service Interruption

At this point in the upgrade, only move Clock Controller 1; do not move Clock Controller 0.

Table 161
Clock Controller switch settings for NTRB53

N/A

Multi-group Single group	Machine Type #1	Faceplate Cable Length CC to CC			Side Number	Machine Type #2
1	2	3	4		5	6
Multi-group = Off Single group = On	21E = Off 51, 61, 51C, 61C 71, 81, 81C = On	Off	Off	0-14 Ft.	Side 0 = On Side 1 = Off	71,81 = Off 21E, 51, 51C, 61. 61C, 81C = On
		Off	On	4.6–6.1 m (15–20 ft.)		
		On	Off	6.4–10.1 m (21–33 ft.)		
		On	On	10.4–15.2 m (34–50 ft.)		
Note: Switch 7 and 8 are not used.						

Table 162
Clock Controller switch settings for QPC471H, QPC771H

QPC775F

Systems upgraded to CP PIV must use the Meridian 1 Option 61C CP PIV switch settings to enable Clock Hunt software. Use the settings in this table.											
SW1				SW2				SW4			
1	2	3	4	1	2	3	4	1	2	3	4
on	on	on	on	off	off	off	off	**	on	*	*
*Total cable length between the J3 faceplate connectors:											
0–4.3 m (0–14 ft.)									off	off	
4.6–6.1 m (15–20 ft.)									off	on	
6.4–10.1 m (21–33 ft.)									on	off	
10.4–15.2 m (34–50 ft.)									on	on	
** Set to ON for Clock Controller 0. Set to OFF for Clock Controller 1.											

————— End of Procedure —————

Installing the Security Device

Procedure 367 Installing the Security Device

The Security Device fits into the System Utility card (see Figure 313 on page 1261).

If the original system had an IODU/C, remove the Security Device from the IODU/C for reuse.

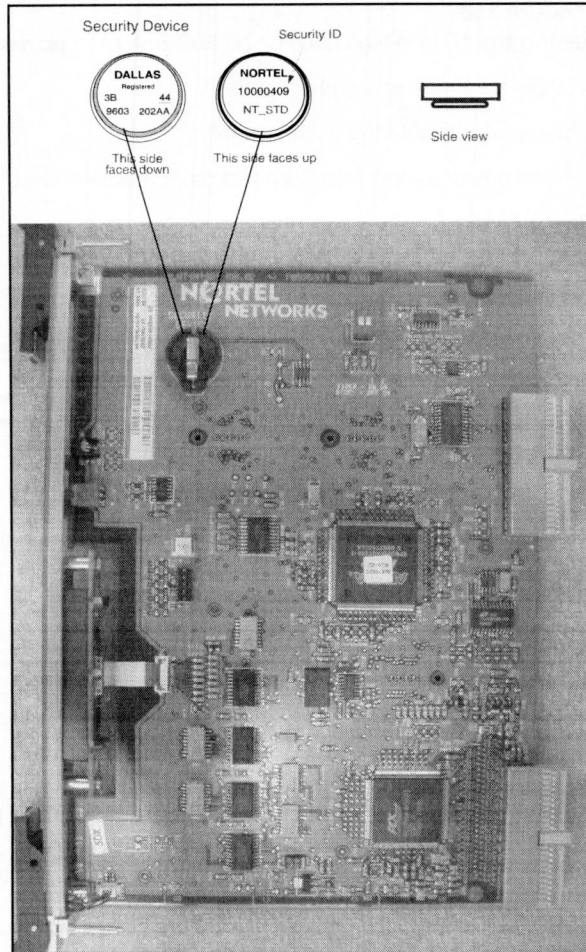
- 1 Unlock the latches and remove the IODU/C card.
- 2 Remove the round 1/2" diameter IODU/C Security Device from the round black Security Device holder on the top right corner of the IODU/C card.
- 3 Insert the Security Device into the Security Device holder on the System Utility card with the "Nortel" side facing up. Check that the Security Device is securely in place.

If the original system did not have an IODU/C, use the Security Device provided with the CP PIV Software kit.

- 1 Insert the Security Device into the Security Device holder on the System Utility card with the "Nortel" side facing up. Do not bend the clip more than necessary.
- 2 Check that the Security Device is securely in place.

End of Procedure

Figure 313
Security Device



Unpack and install Power Supply

Procedure 368

Installing the NT6D41CA (DC) or NT8D29BA (AC) power supply

- 1 Unpack the power supply.
- 2 Faceplate-disable the power supply.
- 3 Insert power supply into Core/Net module power supply slot.

End of Procedure

Cable Core 1

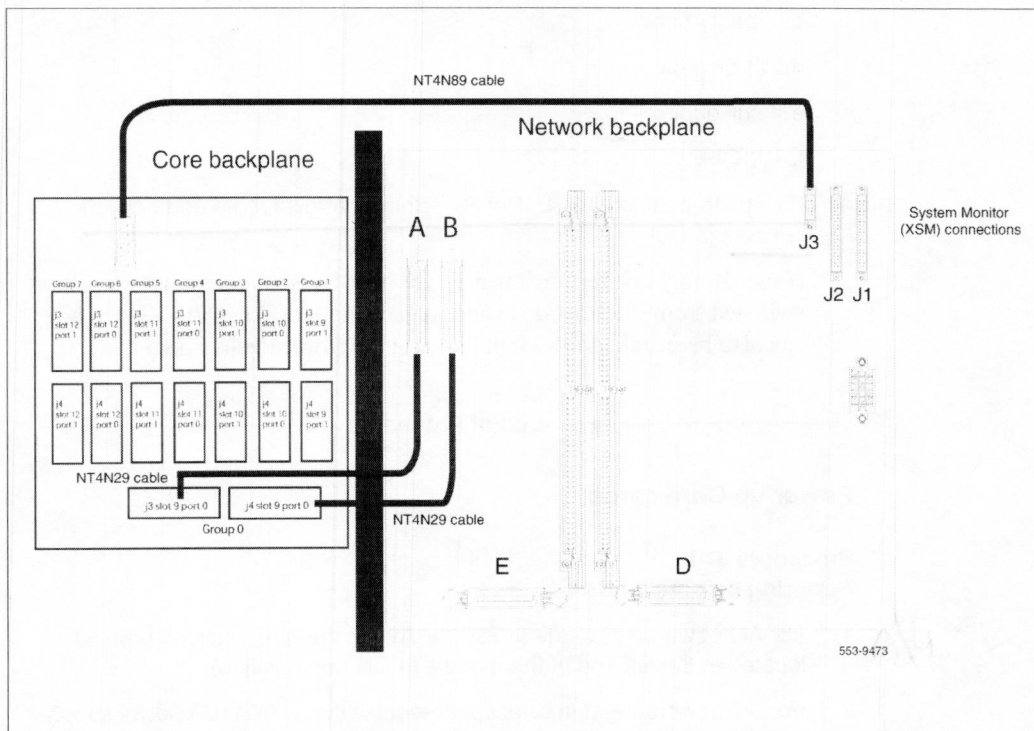
In Core 1, inspect the CNI to 3PE (NT4N29) and system monitor (NT4N89) cables

New NT4N29 cables must be installed for existing Network group 0. If the system has XSDI cards, reinstall the cards and attach the cables. Inspect the NT4N89 system monitor cables. See Figure 314 on page 1263 and Table 163.

Table 163
Fanout Panel to 3PE card connectors

Group Number		Fanout Panel connector		3PE card connector
0	connects	9-0, J3		A
0	from	9-0, J4	to	B
Note: Group 0 cables (NT4N29) connect the fanout panel directly to the network backplane of Core/Net 1.				

Figure 314
Fanout Panel connections on the CP Core/Net backplane



Power up Core 1

Procedure 369 Preparing for power up

- 1 Check that a terminal is connected to the J25 I/O panel connector on Core/Net 1.

Note: A maintenance terminal is required to access the Core/Net modules during the upgrade.

- 2 Connect a terminal to the J25 port on the I/O panel in Core 1.
- 3 Check the terminal settings as follows:

- a. 9600 baud
 - b. 8 data
 - c. parity none
 - d. 1 stop bit
 - e. full duplex
 - f. XOFF
- 4 Faceplate-enable all 3PE, Per Sig, clock controller, core and network cards.

Note: If only one terminal is used for both cores, the terminal must be switched from side-to-side to access each module. An "A/B" switch box can also be installed to switch the terminal from side to side.

End of Procedure

Power up Core cards

Procedure 370

Powering up core cards

- N/A
- OK!
- 1 For AC-powered systems (NT8D29BA): set the MPDU circuit breaker located at the left end of the module to ON (top position).
 - 2 For DC-powered systems: faceplate-enable the NT6D41CA power supply and then set the breaker for the Core 1 module in the back of the column pedestal to ON (top position).

End of Procedure

Restore power

Procedure 371

Restoring power

- 1 Restore power to Core/Net 1.
- 2 Wait for the system to load/initialize.

- 3 Check that the Network and I/O cards have working power.



System is in split mode, CP 0 is active, clock 0 is active,
all network cards in shelf 1 are software disabled.

End of Procedure

CS 1000 Release 4.5 upgrade

Upgrading the software

Procedure 372 outlines the steps involved in installing CS 1000 Release 4.5 for the CP PIV processor.

Procedure 372

Upgrading the software

- 1 Check that a terminal is now connected to COM 1.
- 2 Insert the RMD into the CF card slot.

- 3 Press the manual RESET button on the CP PIV card faceplate.
- 4 Enter <CR> at the Install Tool Menu.
- 5 The system attempts to validate and format the FMD partitions. The following format will occur only if the on-board 1 GByte FMD is blank.

```
>Obtaining and checking system configuration ...
>Validate hard disk partitions
    Validate number of hard drive partitions
    and size ...
        Number of partitions  0:
        Disk check failed: three partitions
        expected
INST0010 Unable to validate Hard disk partition
"/u"
    errNo : 0xd0001
    Please press <CR> when ready ...
INST0010 Unable to validate Hard disk partition
"/p"
    Please press <CR> when ready ...
INST0010 Unable to validate Hard disk partition
"/e"
    Please press <CR> when ready ...
```

The Fix Media Device on Core x is blank.

Install cannot continue unless the FMD is partitioned.

Note: INSTALL WILL REBOOT AFTER THIS PROCEDURE AND

FIX MEDIA WILL BE EMPTY AFTER YOU PARTITION IT.

INSTALL REMOVABLE MEDIA MUST BE IN THE DRIVE AT THIS TIME.

Please enter:

<CR> -> <a> - Partition the Fix Media Device.

Enter choice>

>Repartitioning Fix Media Device ...

fdiskPartCreate(0x12d5ff0c, 1, 4, 0x10)

Size in sectors = 0x8000

Low boundary = 0

High boundary = 0x1e8bdf

fdiskPartCreate(0x12d5ff0c, 2, 11, 0x130)

Size in sectors = 0x98000

Low boundary = 0x7fc1

High boundary = 0x1e8bdf

fdiskPartCreate(0x12d5ff0c, 3, 11, 0x130)

Size in sectors = 0x98000

Low boundary = 0x9ffc1

High boundary = 0x1e8bdf

fdiskPartCreate(0x12d5ff0c, 4, 11, 0x130)

Size in sectors = 0x98000

```
Low boundary = 0x137fc1
High boundary = 0x1e8bdf
>Fix Media Device repartition completed
>Formatting FMD ...
Mounting msdos fs /boot on /dev/hda1...
fdiskDevCreate(/dev/hda1)
/dev/hda1: partTablePtr = 0x12d5ff0c
Found partition 1, nodePtr = 0x12d30a4c
Partition 1 = type MSDOS FAT16 <= 32MB, cbioPtr =
0x131eb2e8
Initializing new slave device 0x131eb2e8
Retrieved old volume params with %95 confidence:
Volume Parameters: FAT type: FAT16, sectors per
cluster 32

    2 FAT copies, 0 clusters, 245 sectors per FAT
    Sectors reserved 1, hidden 63, FAT sectors 490
    Root dir entries 512, sysId (null) , serial
number 3b691afd
    Label:"NO NAME      " ...
Disk with 32705 sectors of 512 bytes will be
formatted with:
Volume Parameters: FAT type: FAT16, sectors per
cluster 2

    2 FAT copies, 16240 clusters, 64 sectors per
FAT
    Sectors reserved 1, hidden 63, FAT sectors 128
    Root dir entries 512, sysId VXDOS16 , serial
number 3b691afd
```

```
Label:"                " ...
Mounting msdos fs /p on /dev/hda2...
fdiskDevCreate(/dev/hda2)
/dev/hda2: partTablePtr = 0x12d5ff0c
Found partition 2, nodePtr = 0x12d30a4c
Partition 2 = type Win95 FAT32, cbioPtr =
0x12d26ee8
Initializing new slave device 0x12d26ee8
Retrieved old volume params with %80 confidence:
Volume Parameters: FAT type: FAT16, sectors per
cluster 195

-61 FAT copies, 0 clusters, 50115 sectors per
FAT

Sectors reserved -15421, hidden -1010580541,
FAT sectors -3057015

Root dir entries -15421, sysId (null) , serial
number cfcfc3c3

Label:"                " ...
Disk with 622592 sectors of 512 bytes will be
formatted with:
Volume Parameters: FAT type: FAT32, sectors per
cluster 8

2 FAT copies, 77660 clusters, 608 sectors per
FAT

Sectors reserved 32, hidden 63, FAT sectors
1216

Root dir entries 0, sysId VX5DOS32, serial
number cfcfc3c3

Label:"                " ... 0x12d22e7c
```

```
Mounting msdos fs /d on /dev/hda3...
fdiskDevCreate(/dev/hda3)
/dev/hda3: partTablePtr = 0x12d5ff0c
Found partition 3, nodePtr = 0x12d30a4c
Partition 3 = type Win95 FAT32, cbioPtr =
0x12d22e7c
Initializing new slave device 0x12d22e7c
Retrieved old volume params with %80 confidence:
Volume Parameters: FAT type: FAT16, sectors per
cluster 195
    -61 FAT copies, 0 clusters, 50115 sectors per
FAT
    Sectors reserved -15421, hidden -1010580541,
FAT sectors -3057015
    Root dir entries -15421, sysId (null) , serial
number cffbc3c3
    Label:"          " ...
;CPP4 reboot automatically
Mounting /cf2
Found /cf2/nvram.sys
Mounting /boot|
Found /boot/nvram.sys
                                Selecting nvram file from 2
sources
Read boot parameters from:
F: Faceplate compact flash
H: Hard Drive
    0 [F]
Reading boot parameters from /boot/nvram.sys
Press any key to stop auto-boot...
```


6 The system then enters the Main Menu for keycode authorization.

```

                M A I N   M E N U

The Software Installation Tool will install or
upgrade Communication Server 1000 Software,
Database and the CP-BOOTROM. You will be
prompted throughout the installation and given
the opportunity to quit at any time.

Please enter:

<CR> -> <u> - To Install menu
          <t> - To Tools menu.
          <q> - Quit.

Enter Choice> <u>
    
```

The system searches for available keycode files in the "keycode" directory on the RMD. If no keycode file is found, the system displays the following menu:

```

Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====
=====

No keycode files are available on the removable
media.

Please replace the RMD containing the keycode
file(s).

Please enter:

          <CR> -> <a> - RMD is now in the drive.
          <q> - Quit.

Enter choice>
    
```

At this point, either replace the RMD or quit the installation. If you select option "<q> - Quit.", the system requires confirmation.

```

Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====
=====

You selected to quit. Please confirm.

Please enter:

    <CR> -> <y> - Yes, quit.

    <n> - No, DON'T quit.

Enter choice>

```

If "y" (quit) is selected, the system prints "INST0127 Keycode file is corrupted. Check Keycode file." and returns to the installation main menu.

After accessing the RMD containing the valid keycode(s), press <CR>. The system displays the keycode file(s) available as in the following example:

```

The following keycode files are available on the
removable media:

Name                               Size   Date       Time
-----
<CR> -> <1> -keycode.kcd 1114 mon-d-year hr:min
<2> - KCport60430m.kcd  1114 mon-d-year hr:min
<q> - Quit

Enter choice> 2

```

Note: A maximum of 20 keycode files can be stored under the "keycode" directory on the RMD. The keycode files must have the same extension ".kcd".

- 7 Select the keycode to be used on the system. The system validates the selected keycode and displays the software release and machine type authorized.

```
Validating keycode ...

Copying "/cf2/keycode/KCport60430m.kcd" to "/u/
keycode" -

Copy OK: 1114 bytes copied

The provided keycode authorizes the install of
xxxx software (all subissues) for machine type
xxxx (CPP4 processor on xxxx).
```

Note: The software release displayed depends on the keycode file content. The machine type displayed can be one of the following, according to the keycode content.

- 3521 (CP PIV processor on CS 1000M SG) for Meridian 1 Option 61C CP PIV
- 3621 (CP PIV processor on CS 1000M MG) for CS 1000E and Meridian 1 Option 81C CP PIV systems

- 8 The system requests keycode validation.

```
Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====

Please confirm that this keycode matches the
System S/W on the RMD.

Please enter:

        <CR> -> <y> - Yes, the keycode matches.
Go on to Install Menu.

        <n> - No, the keycode does not match.
Try another keycode.

Enter choice>
```

- 9 If the keycode matches, enter <CR> to continue the installation. The system displays the Install Menu. Select option "".

```
Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool
=====

I N S T A L L   M E N U

      The Software Installation Tool will
install or upgrade Succession Enterprise System
Software, Database and the CP-BOOTROM. You will be
prompted throughout the installation and given the
opportunity to quit at any time.

      Please enter:

<CR> -> <a> - To install Software, CP-BOOTROM.
        <b> - To install Software, Database,
CP-BOOTROM.

        <c> - To install Database only.
        <d> - To install CP-BOOTROM only.
        <t> - To go to the Tools menu.
        <k> - To install Keycode only.

      For Feature Expansion, use OVL143.

<p> - To install 3900 set Languages.
<q> - Quit.

Enter Choice> <b>
```

- 10 The system requires the insertion of the RMD containing the software to be installed.

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

Please insert the Removable Media Device into the drive on Core x.

Please enter:

 <CR> -> <a> - RMD is now in drive.
Continue with s/w checking.

 <q> - Quit.

Enter choice> <CR>

- 11 If the RMD containing the software is already in the drive, select option "<a> - RMD is now in drive. Continue with s/w checking." (or simply press <CR>) to continue. If the RMD is not yet in the drive, insert it and then press <CR>.

- 12 The system displays the release of the software found on RMD under the "swload" directory and requests confirmation to continue the installation.

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

The RMD contains System S/W version xxxx.

Please enter:

 <CR> -> <y> - Yes, this is the correct
version. Continue.

 <n> - No, this is not the correct version.
Try another RMD or a different keycode.

Enter choice> <CR>

Note: If the RMD contains the correct software release, select option "<y> - Yes, this is the correct version. Continue." (or simply press <CR>) to continue. If the software release is not correct and you want to replace the RMD, insert the correct RMD in the drive and then press <CR>. If you want to replace the keycode, select option "<n> - No, this is not the correct version".

- 13 The Dependency List menus appear.

```
Do you want to install Dependency Lists?  
  
Please enter:  
  
<CR> -> <y> - Yes, Do the Dependency Lists  
installation  
  
          <n> - No, Continue without Dependency Lists  
installation  
  
Enter choice> y  
  
>Processing the install control file ...  
>Installing release xxxx
```

- 14 The Installation Status Summary appears.

INSTALLATION STATUS SUMMARY				

=====+=====+=====+=====				
	Option		Choice	Status Comment
=====+=====+=====+=====				
	SW: RMD to FMD		yes	install for rel XXXXX
=====+=====+=====+=====				
	Option		Choice	Status Comment
=====+=====+=====+=====				
	Dependency Lists		yes	
=====+=====+=====+=====				
	Option		Choice	Status Comment
=====+=====+=====+=====				
	IPMG Software		yes	install for rel XXXXX
	Option		Choice	Status Comment
=====+=====+=====+=====				
	DATABASE		yes	
	Option		Choice	Status Comment
=====+=====+=====+=====				
	CP-BOOTROM		yes	

- 15 Enter <CR> to confirm and continue installation.

Note: After entering yes below, the system copies the software from RMD to FMD (the files copied are listed).

```
Please enter:

<CR> -> <y> - Yes, start installation.

        <n> - No, stop installation. Return to the
Main Menu.


        Enter choice>

>Checking system configuration

You selected to install Software release: XXXX on
the new system.

This will create all necessary directories and
pre-allocate files on the hard disk.

You may continue with software install or quit
now and leave your software unchanged.

Please enter:

        <CR> -> <a> - Continue with new system
install.

        <q> - Quit.

        Enter choice>
```

- 16 The PSDL files menu appears. Enter the appropriate choice for the site's geographic location.

```
*****
PSDL INSTALLATION MENU

The PSDL contains the loadware for all
downloadable cards in the system and loadware for
M3900 series sets.

*****
Select ONE of the SEVEN PSDL files:

1. Global 10 Languages
2. Western Europe 10 Languages
3. Eastern Europe 10 Languages
4. North America 6 Languages
5. Spare Group A
6. Spare Group B
7. Packaged Languages
[Q]uit, <CR> - default

By default option 1 will be selected.
Enter your choice ->x

>Copying new PSDL ...
```

- 17 Successful installation confirmation appears, enter <CR> to continue.

```
Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====

Software release xxxx was installed successfully
on Core x.

All files were copied from RMD to FMD.

Please press <CR> when ready ...
```

- 18 The customer database installation from RMD is employed when upgrading CP PII systems. Select option "<a> - Install CUSTOMER database." from the database installation main menu.

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

You will now perform the database installation.
Please enter:

 <CR> -> <a> - Install CUSTOMER database.
(The Removable Media Device containing the
customer database must be in the drive.

 - Install DEFAULT database.
(The System S/W media must be in drive.)

 <c> - Transfer the previous system
database. (The floppy disk containing the customer
database must be in the floppy drive of the MMDU
pack.

 <e> - Check the database that exists on
the Fixed Media Device.

 <q> - Quit.

Enter choice> **a or <CR>**

The system verifies which customer databases are available on the RMD under directory 'backup' and displays them.

```
The following databases are available on the  
removable media:
```

 <CR> -> <s> - Single database
 created: mon-day-year hour:min

 <q>-Quit

Enter choice> **s or <CR>**

19 Continue with database installation.

```

Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====

You selected to transfer single database from RMD
to FMD on Core x.

The database will be converted from release xxxx.

If you quit now, the database will be left
unchanged.

Please enter:

        <CR> -> <a> - Continue with database
install.

        <q> - Quit.

Enter choice> a or <CR>
    
```

The installation summary screen appears. Verify successful installation and enter <CR> when ready.

```

-----
                     INSTALLATION STATUS SUMMARY
-----

+-----+-----+-----+-----+
| Option | Choice | Status | Comment |
+-----+-----+-----+-----+
| SW: RMD to FMD | yes | OK | install for rel 04xxx |
+-----+-----+-----+-----+
| Dependency Lists | yes | OK | |
+-----+-----+-----+-----+
| AUTO-CSU Feature | no | | AUTO-CSU Disabled |
+-----+-----+-----+-----+
| IPMG Software: | no | | |
+-----+-----+-----+-----+
| Database | yes | OK | conversion from xxxx |
+-----+-----+-----+-----+
| CP-BOOTROM | yes | OK | |
+-----+-----+-----+-----+

Please press <CR> when ready ...
    
```

20 Upon returning to the main install menu, enter **q** to quit.

```

                I N S T A L L   M E N U

    The Software Installation Tool will
    install or upgrade Succession Enterprise System
    Software, Database and the CP-BOOTROM. You will be
    prompted throughout the installation and given the
    opportunity to quit at any time.

    Please enter:

    <CR> -> <a> - To install Software, CP-BOOTROM.
           <b> - To install Software, Database,
    CP-BOOTROM.

           <c> - To install Database only.
           <d> - To install CP-BOOTROM only.
           <t> - To go to the Tools menu.
           <k> - To install Keycode only.

           For Feature Expansion, use OVL143.

           <p> - To install 3900 set Languages.
           <q> - Quit.

    Enter Choice> q
```

- 21 The system then prompts you to confirm and reboot. Enter <CR> to quit. Enter <CR> again to reboot.

```
You selected to quit. Please confirm.

Please enter:

<CR> -> <y> - Yes, quit.

        <n> - No, DON'T quit.

Enter choice> <CR>

You selected to quit the Install Tool.

You may reboot the system or return to the Main
Menu.

-----

DO NOT REBOOT USING BUTTON!!!

-----

Please enter:

<CR> -> <a> - Reboot the system.

        <m> - Return to the Main menu.

Enter Choice> <CR>

>Removing temporary file "/u/disk3521.sys"
>Removing temporary file "/u/disk3621.sys"
>Rebooting system ...
```

At this point the system reloads and initializes.

End of Procedure

Verify the upgraded database

Procedure 373

Verifying the upgraded database

- 1 Print ISSP (system software issue and patches)

LD 22 Load program

REQ ISSP

******** Exit program

- 2 Print the system configuration record in LD 22 and compare the output with the pre-upgraded configuration record.

LD 22 Load program

REQ PRT

TYPE CFN

******** Exit program

- 3 Print the SLT in LD 22. This output provides used and unused ISM parameters. Compare with pre-upgrade SLT output.

LD 22 Load program

REQ SLT

******** Exit program

- 4 Print the customer data block(s) in LD 21.

LD 21	Load program
REQ	PRT
TYPE	CDB
CUST	xx
****	Exit program

Configuring IP addresses

Procedure 374 Configuring the IP addresses

Two unique IP address are required for the CP PIV system to communicate with the LAN. One IP address is defined for the *active* Core. The second IP address is defined for the *inactive* Core.

- 1 Use the following to check the status of the system's IP address:

LD 117	Load program
prt host	Print the configured host information

If the system returns with host names "active" and "inactive", go to "Check for Peripheral Software Download to Core 1" on page 1286. If the system returns no host names, complete the steps below.

- 2 Contact your System Administrator to identify IP address and subnet mask information.
- 3 Configure the primary (*active*) and secondary (*inactive*) IP addresses:

LD 117	Load the program
new host name 1 IP address	Define the first IP address: "name 1" is an alias for the IP address such as "primary". The IP address is the IP number.
chg elnk active name 1	Assign the "name 1" address to the <i>active</i> Core.

new host 'name 2' 'IP address'

Define the second IP address: "name 2" is an alias for the IP address such as "secondary". The IP address is the IP number.

chg elnk inactive name 2

Assign the "name 2" address to the *inactive* Core.

chg mask xxx.xxx.xxx.xxx

Set the sub-net per local site. This number allows external sub-nets to connect to the system.

4 Enable the new Ethernet interface.

LD 137

Load program

dis elnk

Disable the old IP interface values

enl elnk

Enable the new IP interface values

End of Procedure

Check for Peripheral Software Download to Core 1

Enter LD 22 and print Target peripheral software version. The Source peripheral software version was printed in "Print site data" on page 1205. If there is a difference between the Source and Target peripheral software version:

- A forced download occurs during initialization when coming out of parallel reload.
- System initialization takes longer.
- The system drops established calls on IPE.

Access LD 22 and print Target peripheral software version.

LD 22	Load program
REQ	PRT
TYPE	PSWV
ISSP	Print System, DepList, and Patch information
SLT	Print System Limits
TID	Print the Tape ID
****	Exit program

Reconfigure I/O ports and call registers

Procedure 375

Reconfiguring I/O ports and call registers

- 1 Evaluate the number of call registers and 500 telephone buffers that are configured for the system (suggested minimum values are 4500 and 1000 respectively). If changes are required, reconfigure the values in LD 17:

LD 17 Load program

CHG

CFN

PARM YES

500B 1000 Use 1000 as a minimum value

NCR 20000 Use 20000 as a minimum value

******** Exit program

- 2 Print the Configuration Record to confirm the changes made above:

LD 22 Load program

REQ PRT Set the print Option

TYPE CFN Print the configuration

******** Exit program

End of Procedure

Reboot Core/Net 1

Procedure 376

Rebooting Core 1

- 1 Unseat the CP card in Core/Net 0.
- 2 Faceplate-disable the CNI card in Core/Net 0.

- 3 Faceplate-disable the IODUC in CORE/NET 0.
- 4 Faceplate-disable Clock Controller 0 and unseat the card from the backplane.
- 5 Seat Clock Controller 1 and Faceplate-enable it.
- 6 Press the RESET button on the CP PIV card faceplate to reboot the system.
- 7 Wait for "DONE" and then "INI" messages to display before you continue.



Call processing should be active on Core/Net 1, Clock 1 is active, Clock 0 is disabled, and Network cards in Core/Net 0 are disabled.

End of Procedure

Disable equipment in Core 0

Procedure 377

Faceplate disabling cards in core and network slots of Core/Net 0:

- 1 Faceplate-disable all core and network cards in Core/Net 0.
- 2 Set the ENB/DIS switch on the 3PE card to DIS.

End of Procedure

Power down Core/Net 0



CAUTION — Service Interruption

Service Interruption

Call processing is interrupted for approximately 60 minutes while the procedures are completed.



DANGER OF ELECTRIC SHOCK

In a DC-powered system, power to the column can remain on during the following procedures. In an AC-powered system, however, power to the entire column *must* be shut down throughout the procedures.

For AC-powered systems: set the MPDU circuit breaker located at the left end of the module to OFF (down position).

For DC-powered systems: set the breaker for the Core 0 module in the back of the column pedestal to OFF (down position).

Remove Core 0 cables and card cage

Procedure 378

Removing Core 0 cables and card cage

- 1 Label and disconnect all cables to the front of the module.
- 2 Tape over the contacts to avoid grounding.
- 3 Tie all cables to the sides so the working area in front of the card cage is totally clear.
- 4 Remove the I/O safety panel by turning the screws on each side. Set the I/O safety panel aside.
- 5 Tag and disconnect all cables from the backplane to the interior of the I/O assembly.
- 6 Tag and disconnect all plugs, wires, and cables to the backplane.

Note 1: Leave the network cards in the card cage. You will relocate them to the CP card cage later in the upgrade procedure.

Note 2: Two people are needed to remove the Core card cage because of the weight of the card cage with the cards left installed.

- 7 Remove the two mounting screws at the bottom rear of the card cage that secure the card cage to the module casting.



CAUTION — Service Interruption

Do not drop the mounting screws into the pedestal.
Doing so can cause serious damage.

Keep the screws for use with the CP card cage. (You need a 1/4" nut driver to remove the screws.)

- 8 Remove the front trim panels on both sides of the card cage.
- 9 Remove the three mounting screws that secure the front of the card cage to the bottom of the module. Save the screws for use with the CP card cage.
- 10 Pull the card cage forward until it is halfway out of the module.
- 11 Disconnect cables, plugs, and wires from the rear of the module to the backplane.
- 12 Remove the logic return (LTRN) (orange) wire from the backplane bolt. Be careful; do not drop the nut or lock washer into the pedestal. For DC power connectors, see Figure 315 on page 1292. For AC power connectors, see Figure 316 on page 1293.
- 13 Remove the frame ground (FGND) (green) wire from the frame ground bolt on the module.
- 14 Label and disconnect the module power connectors. These are small orange connectors plugged into the module power distribution unit (MPDU) in an AC-powered system, or connected to each other in a DC-powered system.
- 15 Label and disconnect the system monitor ribbon cables to J1 and J2.
- 16 Remove the Core card cage from the module.

Figure 315
DC power connectors on the Core module backplane

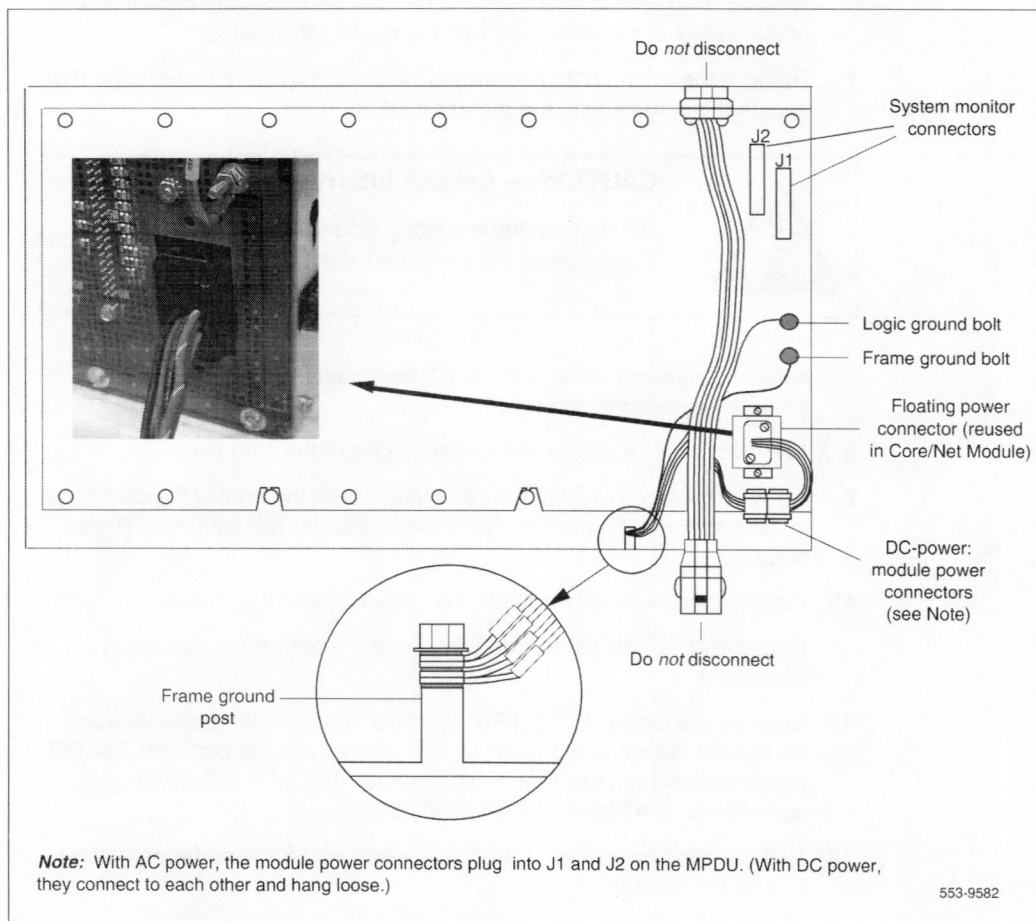
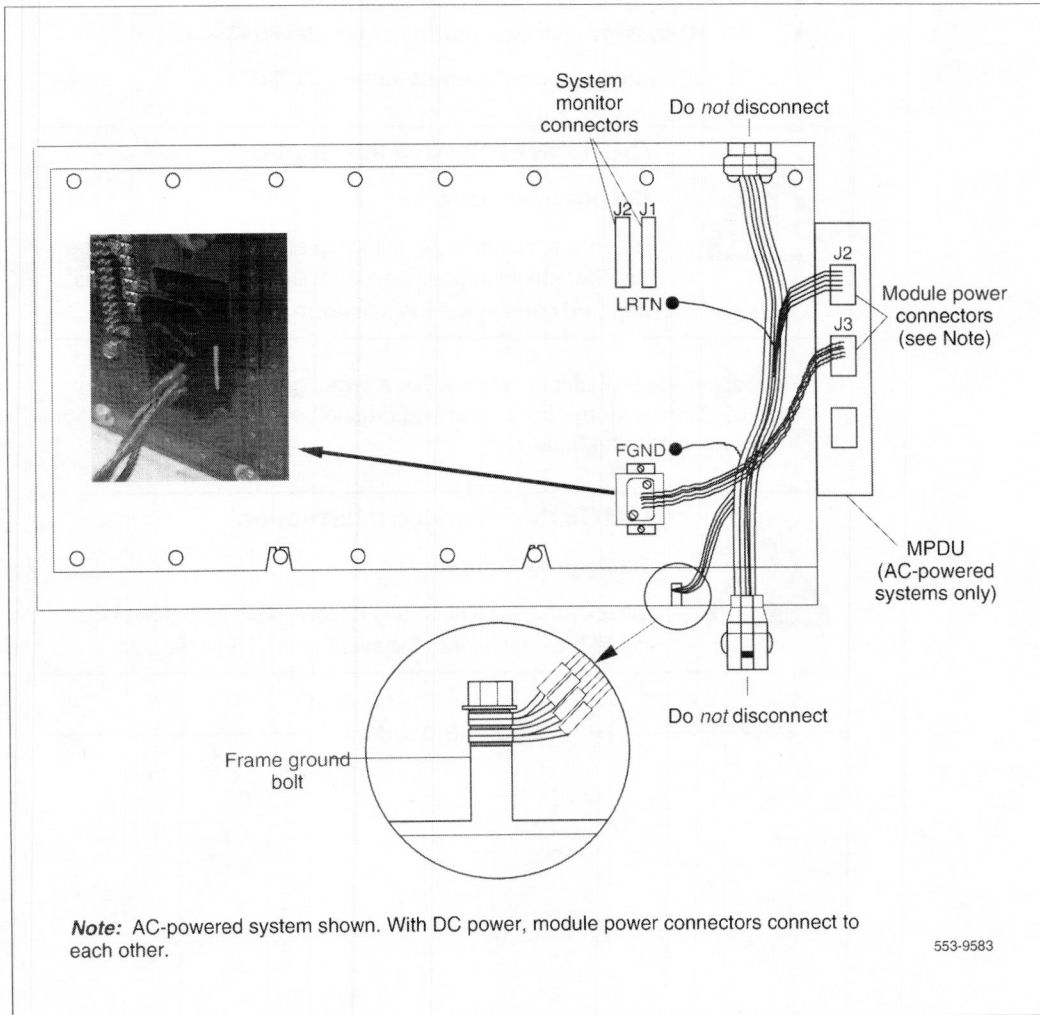


Figure 316
AC power connectors on the Core module backplane



- 17 Remove the power harness and reserve it for reinstallation as part of installing the NT4N40 card cage. The power harness is located at the right rear lower corner and plugs into the rear of the power supply.
- For AC systems, relocate power harness NT8D40.
 - For DC systems, relocate power harness NT7D11.



CAUTION — Service Interruption

Service Interruption

Be sure to perform the following step. If you do not tape the EMI shield in position, you will not be able to install the card cage in the module correctly.

- 18 Reposition the EMI shield (it looks like a brass grill) in the base of the module. Tape over the front mounting tabs to hold the shield in position. You will remove the tape later.



CAUTION — Service Interruption

Damage to Equipment

Check for and remove any debris (such as screws) that could have fallen into the base of the UEM module.

End of Procedure

Upgrade Core 0 hardware

Procedure 379

Checking main Core card installation

The main Core cards (including the cables for power and data), are installed in the factory as shown in Figure 317 on page 1296.

- 1 NT4N65AC CP Core Network Interface (cCNI) cards:
Each system contains one NT4N65 cCNI card per Core/Net module. The cCNI cards are located in slot c9. If not already installed, install a P0605337 CP Card Slot Filler Panel to cover slots c10 - c12, which do not contain cCNIs.

Note: In the NT4N41 Core/Net module, port 0 on the NT4N65 Core to Network Interface (cCNI) Card in slot c9 must be configured as "group 0." The cCNI and 3PE cards for group 0 communicate through the NT4N29 cable. Only one cCNI card is required for group 0 in a Meridian 1 Option 61C CP PIV.

- 2 Slots c13 and c14 are left empty. If not already installed, install a P0605337 CP Card Slot Filler Panel in each slot.
- 3 NT4N48 System Utility (Sys Util) card is located in slot c15.
 - a. Check side ID switch settings for SU card in Core/Net 1 according to Table 164.

Table 164
Core module ID switch settings (System Utility card)

	Position 1	Position 2
Core 0	On	On
Core 1	Off	On

- 4 NT4N39 CP PIV is located in the Call Processor slot.
- 5 The N0026096 blank faceplate is located in the extreme right-hand slot next to the CP PIV card. Check that the NT4N4405 shelf power cable is installed in the CP card cage backplane. See Figure 318 on page 1297 for the cable location.

Figure 317
Core card placement in the NT4N41 Core/Net Module (front)

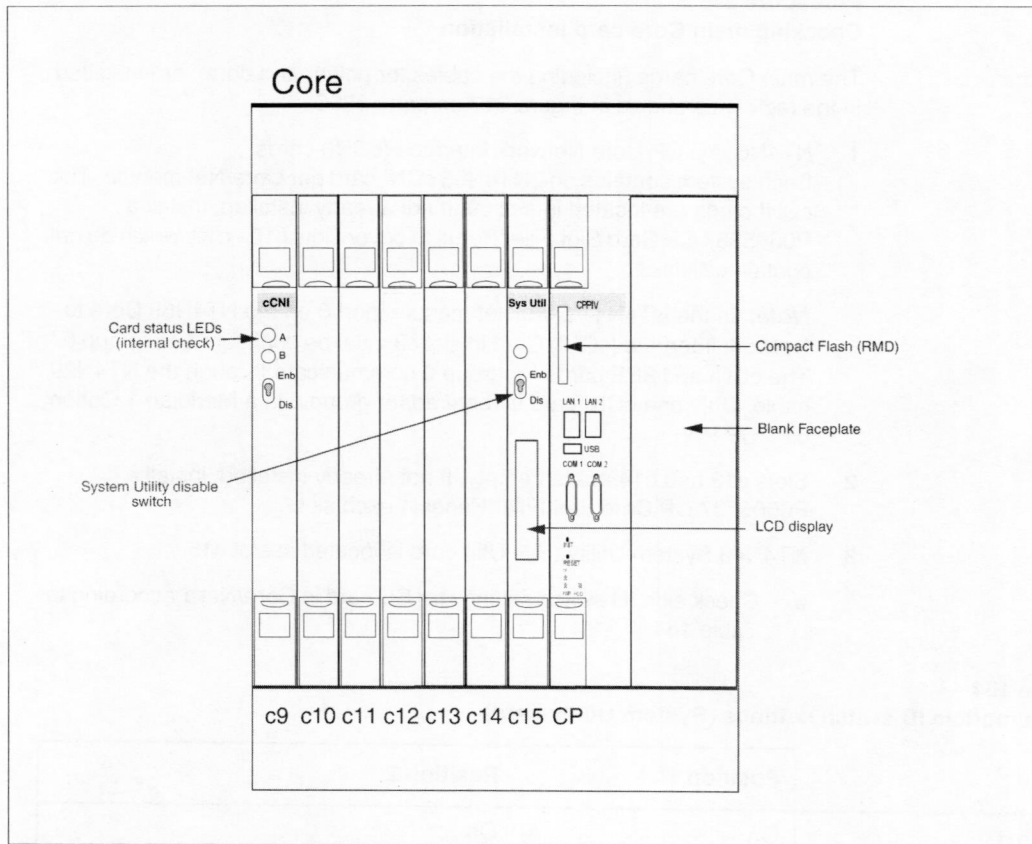
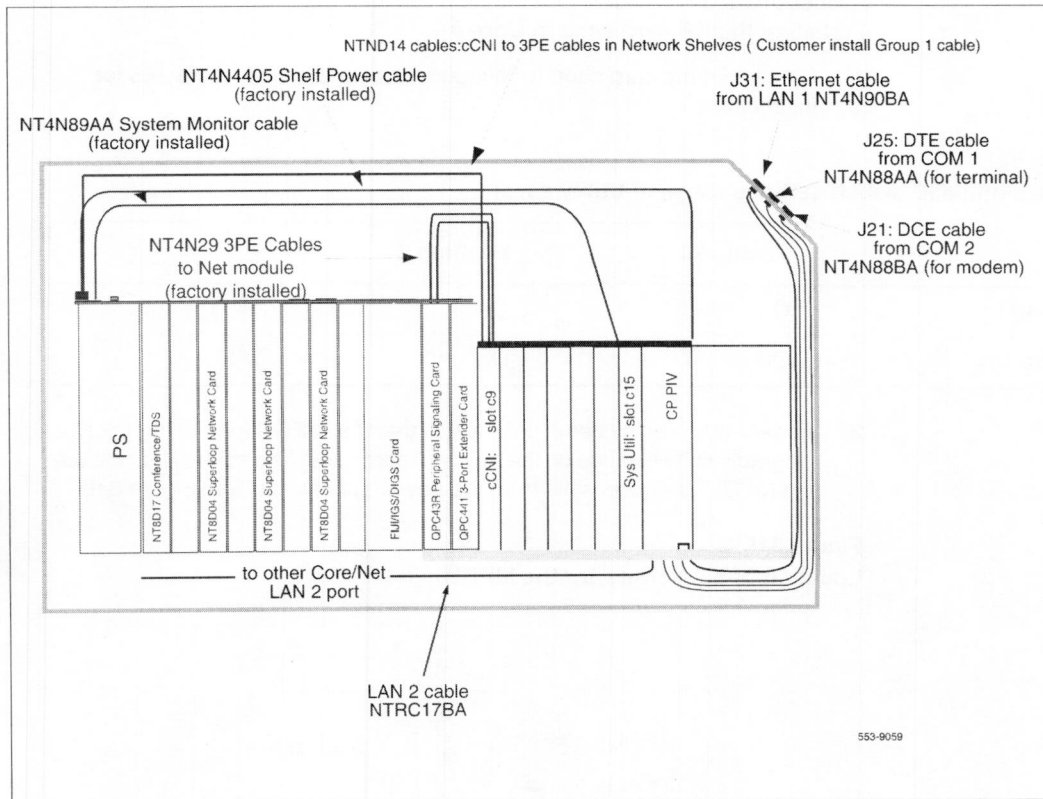


Figure 318
Core/Net cable connections (top view)



Install the CP card cage in Core 0

Procedure 380

Installing the CP card cage in Core 0

- 1 Check that the card cage is configured as Core 0. See Table 165 for instructions.

Table 165

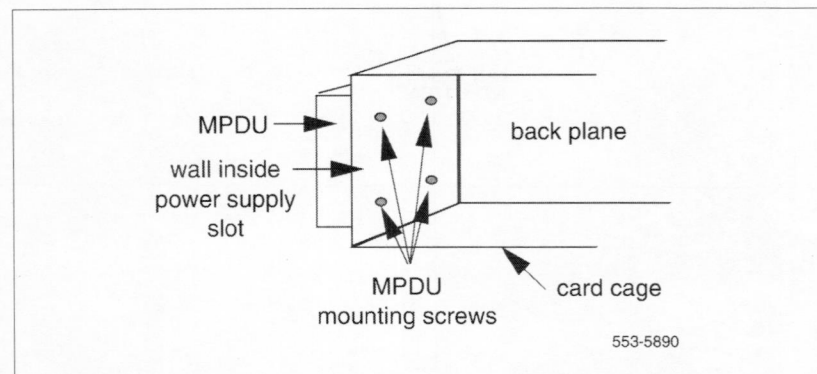
Core module ID switch settings (System Utility card)

	Position 1	Position 2
Core 0	On	On
Core 1	Off	On

- 2 For AC-powered systems only, install the new MPDU, part of the CP PIV Upgrade kit, to the side on the NT4N40 card cage. The screws that secure the MPDU are accessible from the power supply slot. See Figure 319..

Figure 319

Location of the screws for the MPDU



Note: Pre-thread 2 bottom mounting screws at the back of the Core/Net shelf.

- 3 Check that the power harness at the right rear corner of the card cage has been transferred from the old card cage to the CP card cage.

- 4 Slide the CP card cage halfway into the module
- 5 Hold the card cage firmly and make the following connections at the rear of the module.
 - a. In AC-powered systems, connect the remaining module power connectors to J2 on the MPDU. Then plug the module power cable (the short harness attached to the module power connector) into connector J3 on the MPDU (attached to the side of the card cage).



CAUTION — Service Interruption

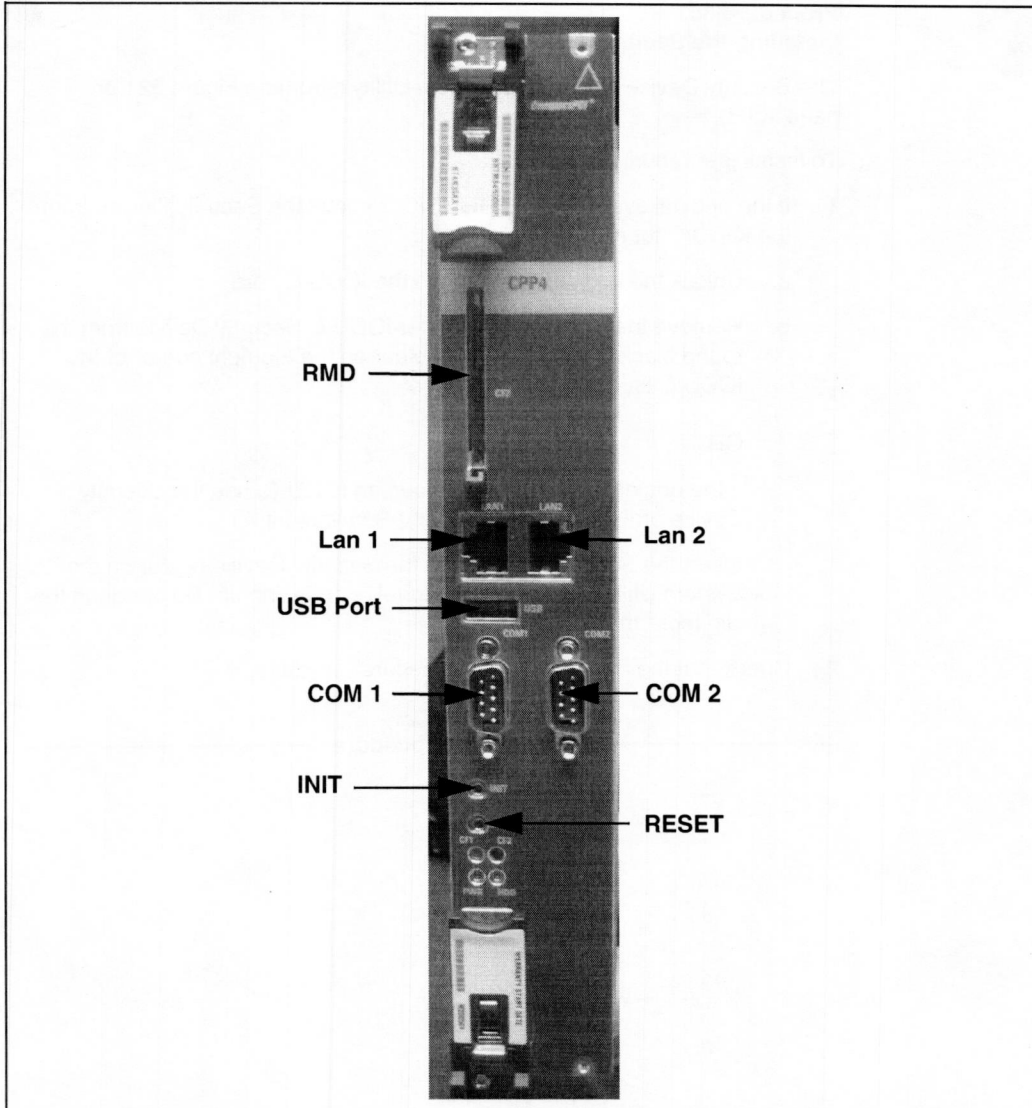
Damage to Equipment

Check for and remove any debris (such as screws) that fell into the base of the UEM module.

- b. In DC-powered systems, connect the module power connectors to each other.
 - c. Attach the system monitor ribbon cables:
 - i. Connect the ribbon cable that goes down to the pedestal to connector J1 on the backplane.
 - ii. Connect the ribbon cable that goes up the column to J2 on the backplane.
 - d. Attach the green ground wire to the frame ground bolt on the module. (a 11/32" socket wrench is used to attach the wire.) Remove the nut and the lock washer at the top of the bolt. Put the frame ground wire terminal over the bolt. Reinstall the top lock washer and the nut, then tighten down the nut.
- Note:** For all of the wire terminals to fit on the bolt, remove one of the lock washers. Leave a lock washer at the bottom of the bolt and at the top of the bolt. Leave a third lock washer between the second and third, or the third and fourth, wire terminals.
- e. Attach the orange logic return wire. Remove one nut and the lock washer from the LRTN bolt at the rear of the card cage. Put the wire terminal over the bolt, reinstall the lock washer and nut, then tighten down the nut. (You need a 1/4" or 2/8" socket wrench.)
 - 6 Slide the card cage all the way into the module.

- 7 Check the position of the EMI shield. If the EMI shield has shifted, reposition it. Remove the tape holding the EMI shield.
- 8 Pre-route cables NT4N88AA, NT4N88BA and NT4N90BA before you secure the card cage.
 - a. Route cable NT4N88AA from COM1 on the CP PIV faceplate to J25 on the I/O panel. NT4N88AA is used to connect a terminal. See Figure 320 on page 1301.
 - b. Route cable NT4N88BA from COM2 on the CP PIV faceplate to J21 on the I/O panel. NT4N88BA is used to connect a modem. Figure 320 on page 1301.
 - c. Route cable NT4N90BA from LAN 1 on the CP PIV faceplate to J31 (top) of the I/O panel. Figure 320 on page 1301.
- 9 Connect the NTRC17BA cross over ethernet cable from LAN 2 on Core/Net 0 faceplate to LAN 2 on Core/Net 1 faceplate. Figure 320 on page 1301.

Figure 320
CP PIV call processor card (front)



————— End of Procedure —————

Install the Security Device

Procedure 381

Installing the Security Device

The Security Device fits into the System Utility card (see Figure 321 on page 1303).

To install the Security Device:

- 1 If the original system had an IODU/C, remove the Security Device from the IODU/C for reuse.
 - a. Unlock the latches and remove the IODU/C card.
 - b. Remove the round 1/2" diameter IODU/C Security Device from the round black Security Device holder on the top right corner of the IODU/C card.

OR

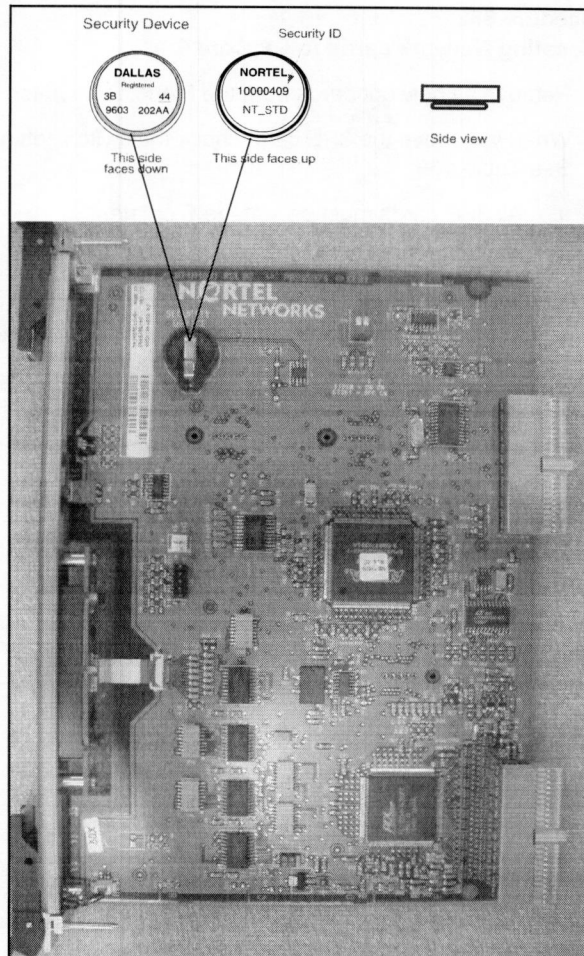
If the original system did not have an IODU/C, use the Security Device provided with the CP PIV Software kit.

Insert the Security Device into the Security Device holder on the System Utility card with the "Nortel" side facing up. Do not bend the clip more than necessary.

- 2 Check that the Security Device is securely in place.

End of Procedure

Figure 321
Security Device



Relocate network cards to Core/Net 0

Procedure 382

Relocating Network cards to CP Core 0

- 1 Remove all network cards from the Meridian 1 Option 61C Core 0.
- 2 When you move the 3PE card, check the switch settings and jumpers. See Table 166.
 - a. All 3PE cards must be vintage F or later.
 - b. Check that the RN27 Jumper is set to "A".
 - c. The settings for 3PE cards in Core/Net shelves are different from those in all other shelves: Table 166 shows the 3PE settings for cards installed in CP PIV Core/Net Modules.
- 3 Reinstall each removed card in the same network slot in the CP PIV Core/Net 0.
- 4 Connect the tagged cables to the relocated cards.

Table 166

QPC441 (QPC440) 3PE Card installed in the CP PIV Core/Net modules

Jumper Settings: Set Jumper RN27 at E35 to "A".									
Switch Settings									
Module		D20 switch position							
CP PIV Core/Net modules only		1	2	3	4	5	6	7	8
Core/Net 0 (Shelf 0)	Group 0	off	on	on	off	on	on	on	on
Core/Net 1 (Shelf 1)	Group 0	off	on	on	off	on	on	on	off

————— End of Procedure —————

Procedure 383
Moving Clock Controller 0



CAUTION — Service Interruption

Service Interruption

Move only Clock Controller 0 at this point in the upgrade.

- 1 Label and disconnect the Clock Controller 0.
- 2 Disconnect the NT8D76AC cable from the Clock Controller 0 faceplate card.
- 3 If primary and secondary clock reference cables are connected to the Clock Controller 0 faceplate, disconnect them last.
- 4 Set the Clock Controller 0 switch settings according to Table 167 on page 1306 (QPC471H, QPC771H) and Table 168 on page 1307 (NTRB53).
- 5 Disable any ISDN PRI card in the Core module.



The active side Core/Net 1 registers all Network cards in Core/Net 0 as disabled.

- 6 Place Clock Controller 0 in Group 0 Network Shelf 0, slot 9.
- 7 Seat the Clock Controller 0 and faceplate-enable the card.

8 Reconnect all reference cables and clock to clock cable.

Table 167

Clock Controller switch settings for QPC471H, QPC771H

Systems upgraded to CP PIV must use the Meridian 1 Option 61C CP PIV switch settings to enable Clock Hunt software. Use the settings in this table.											
SW1				SW2				SW4			
1	2	3	4	1	2	3	4	1	2	3	4
on	on	on	on	off	off	off	off	**	on	*	*
*Total cable length between the J3 faceplate connectors:											
0–4.3 m (0–14 ft.)										off	off
4.6–6.1 m (15–20 ft.)										off	on
6.4–10.1 m (21–33 ft.)										on	off
10.4–15.2 m (34–50 ft.)										on	on
** Set to ON for Clock Controller 0. Set to OFF for Clock Controller 1.											

Table 168
Clock Controller switch settings for NTRB53

Multi-group Single group	Machine Type #1	Faceplate Cable Length CC to CC			Side Number	Machine Type #2
1	2	3	4		5	6
Multi-group = Off Single group = On	21E = Off 51, 61, 51C, 61C 71, 81, 81C = On	Off	Off	0-14 Ft.	Side 0 = On Side 1 = Off	71,81 = Off 21E, 51, 51C, 61. 61C, 81C = On
		Off	On			
		On	Off			
		On	On			

End of Procedure

Cable Core 0

Inspect the NT4N29 cables

The NT4N29 cables must be installed for existing Network group 0. If the system has XSDI cards, reinstall the cards and attach the cables. See Figure 322 on page 1308.

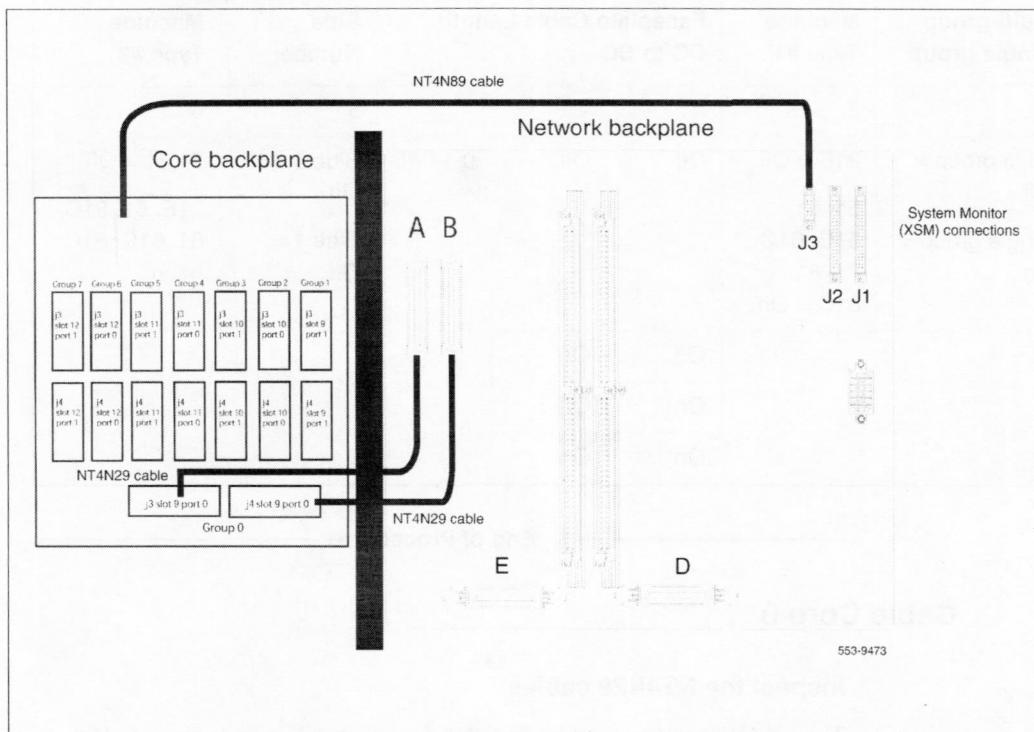
Install intermodule cables

Procedure 384

Installing intermodule cables

- 1 Locate and unpack the NT8D99AD and NT8D80BZ cables.
- 2 Install NT8D99AD cables between the D connectors on the backplane of each Core/Net module. Install another NT8D99AD cable between the E connectors on the backplane of each Core/Net module (see Figure 322 on page 1308).

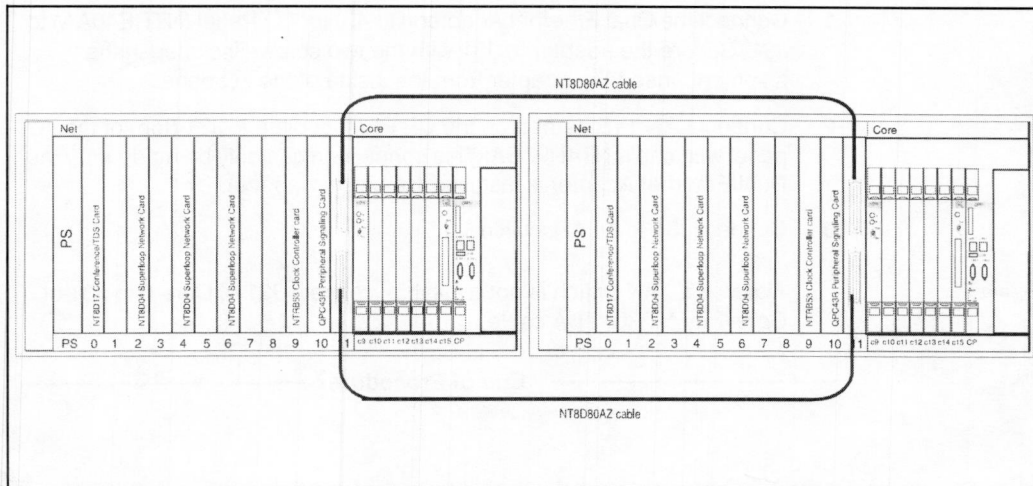
Figure 322
Fanout Panel connections on the CP Core/Net backplane



- 3 Install an NT8D80BZ cable between the J3 connector on the 3PE card in Core/Net 0 and the J3 connector on the 3PE card in Core/Net 1. Install another cable between the J4 connectors on the 3PE cards (see Figure 323 on page 1309).

End of Procedure

Figure 323
3PE card connections



Unpack and install the power supply

Procedure 385

Installing the NT6D41CA (DC) or NT8D29BA (AC) power supply

- 1 Unpack the power supply.
- 2 Faceplate-disable the power supply.
- 3 Insert power supply into Core/Net module power supply slot.

End of Procedure

Connect LAN 1

The LAN 1 port is used to enable redundancy features between the two Core/Net modules. LAN 1 can also be connected to a local area network (LAN) for use with LAN based administration tools such as OTM.

The options for the LAN 1 connections are shown in Figure 324 on page 1311.

Procedure 386

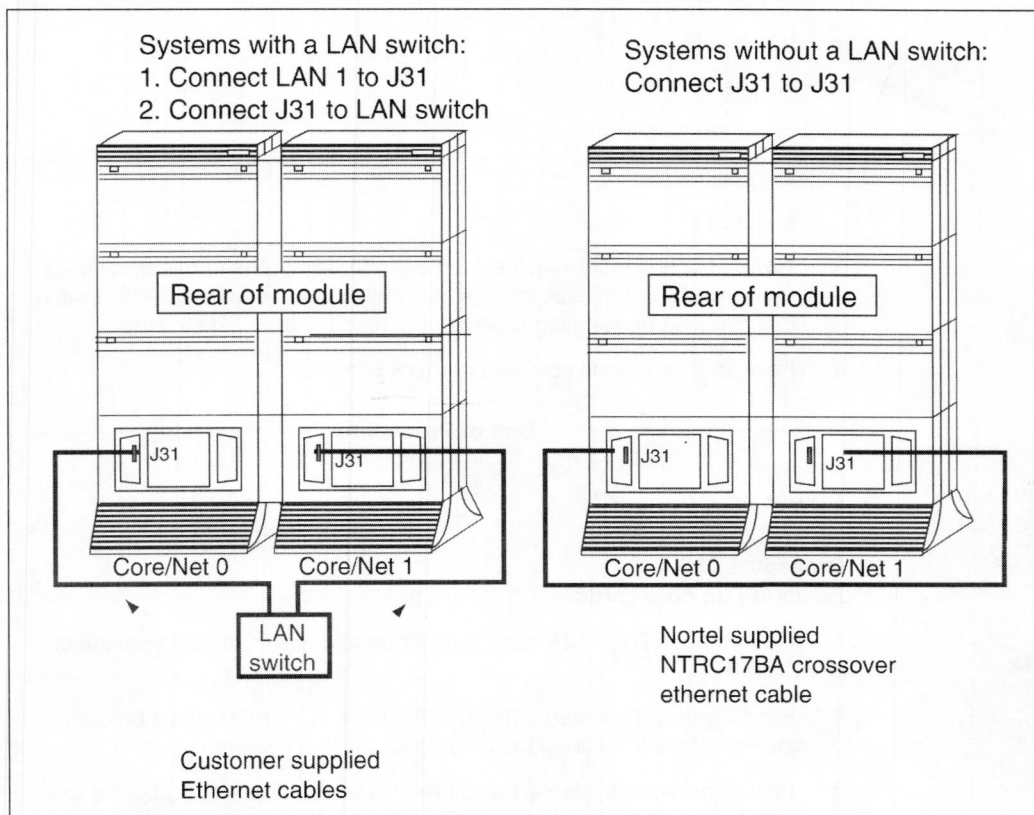
If the system is connected to a LAN

- 1 Connect the Dual Ethernet Adapter (RJ-45) for I/O Panel (NTRE40AA) to J31. Secure the adapter to J31 with the two screws included in the shipment. Insert the adapter from the inside of the I/O panel.
- 2 Connect LAN 1 (Ethernet) on the CP PIV faceplate to J31 (top) of the I/O panel with cable NT4N90BA. This connection can only be made *after* the Dual Ethernet Adapter is installed (see step 1 above).
- 3 Connect J31 to a LAN switch.

Note: If a LAN switch is not available, connect J31 of Core 0 to J31 of Core 1 by NTRC17BA cable.

End of Procedure

Figure 324
Options for LAN 1 connection



Power up Core 0

Procedure 387 Preparing for power up

- 1 Confirm that a terminal is connected to the J25 I/O panel connector on Core/Net 0.

Note: A maintenance terminal is required to access the Core/Net modules during the upgrade.

- 2 Connect a terminal to the J25 port on the I/O panel in Core 0.

3 Check the terminal settings as follows:

- a. 9600 baud
- b. 8 data
- c. parity none
- d. 1 stop bit
- e. full duplex
- f. XOFF

Note: If only one terminal is used for both Cores, the terminal will have to be switched from side-to-side to access each module. An "A/B" switch box can also be installed to switch the terminal from side to side.

4 Faceplate-enable all core and network cards.

End of Procedure

Power up Core cards

Procedure 388

Powering up core cards

- 1 Disconnect NTRC17BA crossover ethernet cable from the faceplate of CPU 0.
- 2 For AC-powered systems (NT8D29BA): set the MPDU circuit breaker located at the left end of the module to ON (top position).
- 3 For DC-powered systems: faceplate-enable the NT6D41CA power supply and then set the breaker for the Core 0 module in the back of the column pedestal to ON (top position).
- 4 10 seconds after power up of Core/Net 0, press the INI button on Core/Net 1.

- 5 Wait for the system to load and initialize.



Core/Net 1 is now active. All network cards in Core/Net 0 and Core/Net 1 are enabled. Call processing is resumed.

End of Procedure

Test Core/Net 1

Procedure 389

Testing Core/Net 1

- 1 Check dial-tone.
- 2 Test the clocks:
 - a. Verify that the clock controller is assigned to the *active* Core.

LD 60	Load program
SSCK x	Get the status of the clock controllers (<i>x</i> is "0" or "1" for Clock 0 or Clock 1)
SWCK	To switch the Clock (if necessary)
****	Exit program

- b. Verify that the clock controllers are switching correctly.

SWCK	Switch the Clock
	Note: You must wait a minimum of one minute for clocks to synchronize.
SWCK	Switch the Clock again
****	Exit program

3 Stat D-channels:

LD 96

STAT DCH Stat all D-channels

**** Exit program

4 Stat all T1 interfaces:

LD 60

STAT Stat all DTI and PRI

**** Exit program

5 Stat network cards:

LD 32

STAT x x = loop number

**** Exit program

6 Print status of all controllers:

LD 97

REQ PRT

TYPE XPE (returns status of all controller cards)

**** Exit program

7 Make internal, external and network calls.

8 Check attendant console activity.

9 Check DID trunks.

10 Check applications (CallPilot, Symposium, Meridian Mail, and so on),

End of Procedure

CS 1000 Release 4.5 upgrade

Upgrading the software

Procedure 390 outlines the steps involved in installing CS 1000 Release 4.5 for the CP PIV processor.

Procedure 390

Upgradng the software

- 1 Check that a terminal is now connected to COM 1.
- 2 Insert the RMD into the CF card slot.

- 3 Press the manual RESET button on the CP PIV card faceplate.
- 4 Enter <CR> at the Install Tool Menu.
- 5 The system attempts to validate and format the FMD partitions. The following format will occur only if the on-board 1 GByte FMD is blank.

```
>Obtaining and checking system configuration ...
>Validate hard disk partitions
    Validate number of hard drive partitions
    and size ...
    Number of partitions  0:
    Disk check failed: three partitions
    expected
INST0010 Unable to validate Hard disk partition
"/u"
    errNo : 0xd0001
    Please press <CR> when ready ...
INST0010 Unable to validate Hard disk partition
"/p"
    Please press <CR> when ready ...
INST0010 Unable to validate Hard disk partition
"/e"
    Please press <CR> when ready ...
```

The Fix Media Device on Core x is blank.

Install cannot continue unless the FMD is partitioned.

Note: INSTALL WILL REBOOT AFTER THIS PROCEDURE AND

FIX MEDIA WILL BE EMPTY AFTER YOU PARTITION IT.

INSTALL REMOVABLE MEDIA MUST BE IN THE DRIVE AT THIS TIME.

Please enter:

<CR> -> <a> - Partition the Fix Media Device.

Enter choice>

>Repartitioning Fix Media Device ...

fdiskPartCreate(0x12d5ff0c, 1, 4, 0x10)

Size in sectors = 0x8000

Low boundary = 0

High boundary = 0x1e8bdf

fdiskPartCreate(0x12d5ff0c, 2, 11, 0x130)

Size in sectors = 0x98000

Low boundary = 0x7fc1

High boundary = 0x1e8bdf

fdiskPartCreate(0x12d5ff0c, 3, 11, 0x130)

Size in sectors = 0x98000

Low boundary = 0x9ffc1

High boundary = 0x1e8bdf

fdiskPartCreate(0x12d5ff0c, 4, 11, 0x130)

Size in sectors = 0x98000

```
Low boundary = 0x137fc1
High boundary = 0x1e8bdf
>Fix Media Device repartition completed
>Formatting FMD ...
Mounting msdos fs /boot on /dev/hda1...
fdiskDevCreate(/dev/hda1)
/dev/hda1: partTablePtr = 0x12d5ff0c
Found partition 1, nodePtr = 0x12d30a4c
Partition 1 = type MSDOS FAT16 <= 32MB, cbioPtr =
0x131eb2e8
Initializing new slave device 0x131eb2e8
Retrieved old volume params with %95 confidence:
Volume Parameters: FAT type: FAT16, sectors per
cluster 32

    2 FAT copies, 0 clusters, 245 sectors per FAT
    Sectors reserved 1, hidden 63, FAT sectors 490
    Root dir entries 512, sysId (null) , serial
number 3b691afd

    Label:"NO NAME      " ...
Disk with 32705 sectors of 512 bytes will be
formatted with:
Volume Parameters: FAT type: FAT16, sectors per
cluster 2

    2 FAT copies, 16240 clusters, 64 sectors per
FAT

    Sectors reserved 1, hidden 63, FAT sectors 128
    Root dir entries 512, sysId VXDOS16 , serial
number 3b691afd
```

```
Label:"          " ...
Mounting msdos fs /p on /dev/hda2...
fdiskDevCreate(/dev/hda2)
/dev/hda2: partTablePtr = 0x12d5ff0c
Found partition 2, nodePtr = 0x12d30a4c
Partition 2 = type Win95 FAT32, cbioPtr =
0x12d26ee8
Initializing new slave device 0x12d26ee8
Retrieved old volume params with %80 confidence:
Volume Parameters: FAT type: FAT16, sectors per
cluster 195

-61 FAT copies, 0 clusters, 50115 sectors per
FAT

Sectors reserved -15421, hidden -1010580541,
FAT sectors -3057015

Root dir entries -15421, sysId (null) , serial
number cfcfc3c3

Label:"          " ...
Disk with 622592 sectors of 512 bytes will be
formatted with:
Volume Parameters: FAT type: FAT32, sectors per
cluster 8

2 FAT copies, 77660 clusters, 608 sectors per
FAT

Sectors reserved 32, hidden 63, FAT sectors
1216

Root dir entries 0, sysId VX5DOS32, serial
number cfcfc3c3

Label:"          " ... 0x12d22e7c
```

```
Mounting msdos fs /d on /dev/hda3...
fdiskDevCreate(/dev/hda3)
/dev/hda3: partTablePtr = 0x12d5ff0c
Found partition 3, nodePtr = 0x12d30a4c
Partition 3 = type Win95 FAT32, cbioPtr =
0x12d22e7c
Initializing new slave device 0x12d22e7c
Retrieved old volume params with %80 confidence:
Volume Parameters: FAT type: FAT16, sectors per
cluster 195
    -61 FAT copies, 0 clusters, 50115 sectors per
FAT
    Sectors reserved -15421, hidden -1010580541,
FAT sectors -3057015
    Root dir entries -15421, sysId (null) , serial
number cffbc3c3
    Label:"          " ...
;CPP4 reboot automatically

Mounting /cf2
Found /cf2/nvram.sys
Mounting /boot|
Found /boot/nvram.sys

                                Selecting nvram file from 2
sources

Read boot parameters from:
F: Faceplate compact flash
H: Hard Drive

    0 [F]

Reading boot parameters from /boot/nvram.sys
Press any key to stop auto-boot...
```


- 6 The system then enters the Main Menu for keycode authorization.

```

M A I N      M E N U

The Software Installation Tool will install or
upgrade Communication Server 1000 Software,
Database and the CP-BOOTROM. You will be
prompted throughout the installation and given
the opportunity to quit at any time.

Please enter:

<CR> -> <u> - To Install menu

          <t> - To Tools menu.

          <q> - Quit.

Enter Choice> <u>
```

The system searches for available keycode files in the "keycode" directory on the RMD. If no keycode file is found, the system displays the following menu:

```

Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====
=====

No keycode files are available on the removable
media.

Please replace the RMD containing the keycode
file(s).

Please enter:

          <CR> -> <a> - RMD is now in the drive.

          <q> - Quit.

Enter choice>
```

At this point, either replace the RMD or quit the installation. If you select option "<q> - Quit.", the system requires confirmation.

```

Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====
=====

You selected to quit. Please confirm.

Please enter:

    <CR> -> <y> - Yes, quit.

    <n> - No, DON'T quit.

Enter choice>

```

If "y" (quit) is selected, the system prints "INST0127 Keycode file is corrupted. Check Keycode file." and returns to the installation main menu.

After accessing the RMD containing the valid keycode(s), press <CR>. The system displays the keycode file(s) available as in the following example:

```

The following keycode files are available on the
removable media:

Name                               Size   Date       Time
-----
<CR> -> <1> -keycode.kcd 1114 mon-d-year hr:min
<2> - KCport60430m.kcd   1114 mon-d-year hr:min
<q> - Quit
Enter choice> 2

```

Note: A maximum of 20 keycode files can be stored under the "keycode" directory on the RMD. The keycode files must have the same extension ".kcd".

- 7 Select the keycode to be used on the system. The system validates the selected keycode and displays the software release and machine type authorized.

```
Validating keycode ...  
  
Copying "/cf2/keycode/KCport60430m.kcd" to "/u/  
keycode" -  
  
Copy OK: 1114 bytes copied  
  
The provided keycode authorizes the install of  
xxxx software (all subissues) for machine type  
xxxx (CPP4 processor on xxxx).
```

Note: The software release displayed depends on the keycode file content. The machine type displayed can be one of the following, according to the keycode content.

- 3521 (CP PIV processor on CS 1000M SG) for Meridian 1 Option 61C CP PIV
- 3621 (CP PIV processor on CS 1000M MG) for CS 1000E and Meridian 1 Option 81C CP PIV systems

- 8 The system requests keycode validation.

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

Please confirm that this keycode matches the
System S/W on the RMD.

Please enter:

<CR> -> <y> - Yes, the keycode matches.
Go on to Install Menu.

<n> - No, the keycode does not match.
Try another keycode.

Enter choice>

- 9 If the keycode matches, enter <CR> to continue the installation. The system displays the Install Menu. Select option "".

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
=====
```

I N S T A L L M E N U

 The Software Installation Tool will
install or upgrade Succession Enterprise System
Software, Database and the CP-BOOTROM. You will be
prompted throughout the installation and given the
opportunity to quit at any time.

 Please enter:

<CR> -> <a> - To install Software, CP-BOOTROM.
 - To install Software, Database,
CP-BOOTROM.
 <c> - To install Database only.
 <d> - To install CP-BOOTROM only.
 <t> - To go to the Tools menu.
 <k> - To install Keycode only.

 For Feature Expansion, use OVL143.

<p> - To install 3900 set Languages.
<q> - Quit.

Enter Choice>

- 10 The system requires the insertion of the RMD containing the software to be installed.

```

Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====
Please insert the Removable Media Device into the
drive on Core x.

Please enter:

        <CR> -> <a> - RMD is now in drive.
Continue with s/w checking.

        <q> - Quit.

Enter choice> <CR>
    
```

- 11 If the RMD containing the software is already in the drive, select option "<a> - RMD is now in drive. Continue with s/w checking." (or simply press <CR>) to continue. If the RMD is not yet in the drive, insert it and then press <CR>.

- 12 The system displays the release of the software found on RMD under the "swload" directory and requests confirmation to continue the installation.

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

The RMD contains System S/W version xxxx.

Please enter:

 <CR> -> <y> - Yes, this is the correct
version. Continue.

 <n> - No, this is not the correct version.
Try another RMD or a different keycode.

Enter choice> <CR>

Note: If the RMD contains the correct software release, select option "<y> - Yes, this is the correct version. Continue." (or simply press <CR>) to continue. If the software release is not correct and you want to replace the RMD, insert the correct RMD in the drive and then press <CR>. If you want to replace the keycode, select option "<n> - No, this is not the correct version".

- 13 The Dependency List menus appear.

```
Do you want to install Dependency Lists?  
  
Please enter:  
  
<CR> -> <y> - Yes, Do the Dependency Lists  
installation  
  
          <n> - No, Continue without Dependency Lists  
installation  
  
Enter choice> y  
  
>Processing the install control file ...  
>Installing release xxxx
```

14 The Installation Status Summary appears.

INSTALLATION STATUS SUMMARY			

=====+=====+=====+=====			
Option	Choice	Status	Comment
=====+=====+=====+=====			
SW: RMD to FMD	yes		install for rel XXXXX
=====+=====+=====+=====			
Option	Choice	Status	Comment
=====+=====+=====+=====			
Dependency Lists	yes		
=====+=====+=====+=====			
Option	Choice	Status	Comment
=====+=====+=====+=====			
IPMG Software	yes		install for rel XXXXX
Option	Choice	Status	Comment
=====+=====+=====+=====			
DATABASE	yes		
Option	Choice	Status	Comment
=====+=====+=====+=====			
CP-BOOTROM	yes		

- 15 Enter <CR> to confirm and continue installation.

Note: After entering yes below, the system copies the software from RMD to FMD (the files copied are listed).

```
Please enter:

<CR> -> <y> - Yes, start installation.

        <n> - No, stop installation. Return to the
Main Menu.


        Enter choice>

>Checking system configuration

You selected to install Software release: XXXX on
the new system.

This will create all necessary directories and
pre-allocate files on the hard disk.

You may continue with software install or quit
now and leave your software unchanged.

Please enter:

        <CR> -> <a> - Continue with new system
install.

        <q> - Quit.

        Enter choice>
```

- 16 The PSDL files menu appears. Enter the appropriate choice for the site's geographic location.

```
*****
PSDL INSTALLATION MENU

The PSDL contains the loadware for all
downloadable cards in the system and loadware for
M3900 series sets.

*****
Select ONE of the SEVEN PSDL files:

1. Global 10 Languages
2. Western Europe 10 Languages
3. Eastern Europe 10 Languages
4. North America 6 Languages
5. Spare Group A
6. Spare Group B
7. Packaged Languages
[Q]uit, <CR> - default

By default option 1 will be selected.
Enter your choice ->x

>Copying new PSDL ...
```

- 17 Successful installation confirmation appears, enter <CR> to continue.

```
Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====

Software release xxxx was installed successfully
on Core x.

All files were copied from RMD to FMD.

Please press <CR> when ready ...
```

- 18 The customer database installation from RMD is employed when upgrading CP PII systems. Select option "<a> - Install CUSTOMER database." from the database installation main menu.

```
Communication Server 1000 Software/Database/  
BOOTROM RMD Install Tool  
  
=====
```

You will now perform the database installation.
Please enter:

```
      <CR> -> <a> - Install CUSTOMER database.  
  
(The Removable Media Device containing the  
customer database must be in the drive.  
  
      <b> - Install DEFAULT database.  
  
(The System S/W media must be in drive.)  
  
      <c> - Transfer the previous system  
database. (The floppy disk containing the customer  
database must be in the floppy drive of the MMDU  
pack.  
  
      <e> - Check the database that exists on  
the Fixed Media Device.  
  
      <q> - Quit.  
  
Enter choice> a or <CR>
```

The system verifies which customer databases are available on the RMD under directory 'backup' and displays them.

```
The following databases are available on the  
removable media:  
  
      <CR> -> <s> - Single database  
      created: mon-day-year hour:min  
  
      <q>-Quit  
  
Enter choice> s or <CR>
```


19 Continue with database installation.

```

Communication Server 1000 Software/Database/
BOOTROM RMD Install Tool

=====

You selected to transfer single database from RMD
to FMD on Core x.

The database will be converted from release xxxx.
If you quit now, the database will be left
unchanged.

Please enter:

        <CR> -> <a> - Continue with database
install.

        <q> - Quit.

Enter choice> a or <CR>
    
```

The installation summary screen appears. Verify successful installation and enter <CR> when ready.

```

-----
                        INSTALLATION STATUS SUMMARY
-----

+-----+-----+-----+-----+
| option | choice | status | comment |
+-----+-----+-----+-----+
| SW: RMD to FMD | yes | OK | install for rel 04xxx |
+-----+-----+-----+-----+
| dependency Lists | yes | OK | |
+-----+-----+-----+-----+
| AUTO-CSU Feature | no | | AUTO-CSU Disabled |
+-----+-----+-----+-----+
| IPMG Software: | no | | |
+-----+-----+-----+-----+
| Database | yes | OK | conversion from xxxx |
+-----+-----+-----+-----+
| CP-BOOTROM | yes | OK | |
+-----+-----+-----+-----+

Please press <CR> when ready ...
    
```

- 20 Upon returning to the main install menu, enter **q** to quit.

```

                I N S T A L L   M E N U

The Software Installation Tool will
install or upgrade Succession Enterprise System
Software, Database and the CP-BOOTROM. You will be
prompted throughout the installation and given the
opportunity to quit at any time.

Please enter:

<CR> -> <a> - To install Software, CP-BOOTROM.
        <b> - To install Software, Database,
CP-BOOTROM.

        <c> - To install Database only.
        <d> - To install CP-BOOTROM only.
        <t> - To go to the Tools menu.
        <k> - To install Keycode only.

        For Feature Expansion, use OVL143.

        <p> - To install 3900 set Languages.
        <q> - Quit.

Enter Choice> q
```

- 21 The system then prompts you to confirm and reboot. Enter <CR> to quit. Enter <CR> again to reboot.

```
You selected to quit. Please confirm.

Please enter:

<CR> -> <y> - Yes, quit.

        <n> - No, DON'T quit.


Enter choice> <CR>

You selected to quit the Install Tool.

You may reboot the system or return to the Main
Menu.


-----

DO NOT REBOOT USING BUTTON!!!

-----


Please enter:

<CR> -> <a> - Reboot the system.

        <m> - Return to the Main menu.

Enter Choice> <CR>

>Removing temporary file "/u/disk3521.sys"
>Removing temporary file "/u/disk3621.sys"
>Rebooting system ...
```

At this point the system reloads and initializes.

End of Procedure

Verify the upgraded database

Procedure 391

Verifying the upgraded database

- 1 Print ISSP (system software issue and patches)

LD 22 Load program

REQ ISSP

 **** Exit program

- 2 Print the system configuration record in LD 22 and compare the output with the pre-upgraded configuration record.

LD 22 Load program

REQ PRT

TYPE CFN

 **** Exit program

- 3 Print the SLT in LD 22. This output provides used and unused ISM parameters. Compare with pre-upgrade SLT output.

LD 22 Load program

REQ SLT

 **** Exit program

- 4 Print the customer data block(s) in LD 21.

LD 21	Load program
REQ	PRT
TYPE	CDB
CUST	xx
****	Exit program



Core 1 is now active, clock 1 is active, CNI is disabled in Core 0.

End of Procedure

Procedure 392

Connecting the system monitor to Core/Net 0

- 1 Connect the system monitor to the rear of the pedestal.
- 2 For the Core column, connect J3 and J4 cables to the system monitor.

Note: Do *not* turn off the blower units in the front of the pedestals.

End of Procedure

Check for Peripheral Software Download to Core 0

Enter LD 22 and print Target peripheral software version. The Source peripheral software version was printed in "Print site data" on page 1205.

If there is a difference between the Source and Target peripheral software version:

- A forced download occurs during initialization when coming out of parallel reload.
- System initialization takes longer.
- The system drops established calls on IPE.

LD 22

REQ	PRT
TYPE	PSWV
ISSP	Print System, DepList, and Patch information
SLT	Print System Limits
TID	Print the Tape ID
****	Exit program

Making the system redundant

At this point, Core/Net 0 is ready to be synchronized with Core/Net 1.

Procedure 393

Making the system redundant

- 1** Attach the LAN 1 and LAN 2 cables to the CP PIV faceplate connectors on Call Server 0 and Call Server 1.
- 2** Enter LD 135 and issue the JOIN command. The high speed pipe (HSP) status is now up. This begins the synchronization of the Call Servers.

LD 135 Load program

JOIN Join the 2 CPUs together to become redundant

- 3** Once the synchroization of memories and drives is complete, STAT the CPU and verify that the CPUs are in a true redundant state.

LD 135

STAT CPU Get status of CPU and memory

******** Exit the program

```
.stat cpu

cp 0 16 PASS -- STDBY

TRUE REDUNDANT
DISK STATE = REDUNDANT
HEALTH = 20
VERSION = Mar  3 2005, 16:26:40
Side = 0, DRAM SIZE = 512 MBytes

cp 1 16 PASS -- ENBL

TRUE REDUNDANT
DISK STATE = REDUNDANT
HEALTH = 20
VERSION = Mar  3 2005, 16:26:40
Side = 1, DRAM SIZE = 512 MBytes
```

- 4 Tier 1 and Tier 2 health of both Cores must be identical in order to successfully switch service from Core 1 to Core 0 CPUs.

LD 135

STAT HEALTH Get status of CPU and memory

**** Exit the program

```
.stat health
Local (Side 0, Active, Redundant):
Components without TIER 1 Health contribution:
=====

disp 0 15 1:In Service
sio2 0 15 1:In Service
cp 0 16:In Service
ipb 0:In Service
TIER 1 Health Count Breakdown:
=====

sio8 0 16 1: 0002
sio8 0 16 2: 0002
sutl 0 15: 0002
strn 0 15: 0002
xsmp 0 15 1: 0002
cmdu 0 16 1: 0008
eth 0 16 0: 0002
Local TIER 1 Health Total: 20
```

```
TIER 2 Health Count Breakdown:
=====
ELAN 16 IP : 47.11.138.150 Health = 2
ELAN 17 IP : 47.11.138.153 Health = 2

Local AML over ELAN Total Health:4
Local Total IPL Health = 6

IPL connection history:3 3 3 3 3 3 3 3 3 3 3 3 3
3 3 3 3 3 3

Local TIER 2 Health Total:10

Remote (Side 1, Inactive, Redundant):
Components without TIER 1 Health contribution:
    disp 1 15 1:In Service
    sio2 1 15 1:In Service
    cp 1 16:In Service
    ipb 1:In Service

TIER 1 Health Count Breakdown:
    sio8 1 16 1: 0002
    sio8 1 16 2: 0002
    sutl 1 15: 0002
    strn 1 15: 0002
    xsmp 1 15 1: 0002
    cmdu 1 16 1: 0008
    eth 1 16 0: 0002

Remote TIER 1 Health Total: 20
```


TIER 2 Health Count Breakdown:

=====

ELAN 16 IP : 47.11.138.150 Health = 2

ELAN 17 IP : 47.11.138.153 Health = 2

Remote AML over ELAN Total Health:4

Remote Total IPL health = 6

Remote TIER 2 Health Total:10



The system is now operating in full redundant mode with Core/Net 1 active.

Complete the CP PIV upgrade

LD 137 modifications

The CMDU/MMDU commands are not applicable to CP PIV. Instead, the following commands are introduced in LD 137.

- STAT FMD
display text: **Status of Fixed Media Device (FMD)**
command parameter: none
- STAT RMD
display text: **Status of Removable Media Device (RMD)**
command parameter: none

Testing the Cores

Procedure 394

Testing Core/Net 1

At this point in the upgrade, Core/Net 0 is tested from active Core/Net 1. Upon successful completion of these tests, call processing is switched and the same tests are performed on Core/Net 1 from active Core/Net 0. As a final step, call processing is then switched again to Core/Net 1.

From Core/Net 1, perform these tests:

- 1 Perform a redundancy sanity test:

LD 135 Load program

STAT CPU Get status of CPU and memory

TEST CPU Test CPU

- 2 Check the LCD states:

a. Perform a visual check of the LCDs.

b. Test LCDs:

LD 135 Load program

DSPL ALL

- 3 Test the System Utility cards and the cCNI cards:

LD 135 Load program

STAT SUTL Get the status of the System Utility card

TEST SUTL Test the System Utility card

STAT CNI c s Get status of cCNI cards (core, slot)

TEST CNI c s Test cCNI (core, slot)

4 Test system redundancy:

LD 137	Load program
TEST RDUN	Test redundancy
DATA RDUN	Test database integrity

5 Install the two system monitors. Test that the system monitors are working:

LD 37	Load program
ENL TTY x	Enable the XMS, where x= system XMS
STAT XSM	Check the system monitors
****	Exit program

6 Clear the display and minor alarms on both Cores:

LD 135	Load program
CDSP	Clear displays on the cores
CMAJ	Clear major alarms
CMIN ALL	Clear minor alarms

7 Test the clocks:

- a. Verify that the clock controller is assigned to the *active* Core:

LD 60	Load program
SSCK x	Get status of the clock controllers (x is "0" or "1" for Clock 0 or Clock 1)
SWCK	Switch the Clock (if necessary)
****	Exit program

8 Verify that the Clock Controllers are switching correctly:

SWCK Switch Clock

Note: You must wait a minimum of one minute for clocks to synchronize.

SWCK Switch Clock again

9 Check applications (CallPilot, Symposium, Meridian Mail, and so on.).

10 Check dial tone.

End of Procedure

Switch call processing

Procedure 395

Switching call processing

- 1 Enter LD 135 on Core/Net 1 and issue the CUTOVR command. Call processing switches to Call Server 0 and service is interrupted.

LD 135

CUTOVR Transfer call processing from active Call Server to standby Call Server

**** Exit program

- 2 After Call Server 0 initializes. log in to Call Server 0 and verify that the cutover was successful and that all hardware is operational. Perform acceptance testing as required.

3



Core/Net 0 is now the active call processor.

Procedure 396

Testing Core/Net 0

From Core/Net 0, perform these tests:

- 1 Perform a redundancy sanity test:

LD 135 Load program

STAT CPU Get status of CPU and memory

TEST CPU Test CPU

- 2 Check the LCD states:

a. Perform a visual check of the LCDs.

b. Test LCDs:

LD 135 Load program

TEST LCDs Test LCDs

DSPL ALL

3 Test the System Utility cards and the cCNI cards:

LD 135 Load program

STAT SUTL Get the status of the System Utility card

TEST SUTL Test the System Utility card

STAT CNI c s Get status of cCNI cards (core, slot)

TEST CNI c s Test cCNI (core, slot)

4 Test system redundancy:

LD 137 Load program

TEST RDUN Test redundancy

DATA RDUN Test database integrity

STAT FMD Status of Fixed Media Device (FMD)

STAT RMD Status of Removable Media Device (RMD)

5 Install the two system monitors. Test that the system monitors are working:

LD 37 Load program

ENL TTY x Enable the XMS, where x= system XMS

STAT XSM Check the system monitors

******** Exit program

- 6 Clear the display and minor alarms on both Cores:

LD 135	Load program
CDSP	Clear displays on the cores
CMAJ	Clear major alarms
CMIN ALL	Clear minor alarms

- 7 Test the clocks:

- a. Verify that the clock controller is assigned to the *active* Core:

LD 60	Load program
SSCK <i>x</i>	Get status of the clock controllers (<i>x</i> is "0" or "1" for Clock 0 or Clock 1)
SWCK	Switch the Clock (if necessary)
****	Exit program

- 8 Verify that the Clock Controllers are switching correctly:

SWCK	Switch Clock
	Note: You must wait a minimum of one minute for clocks to synchronize.
SWCK	Switch Clock again

- 9 Check applications (CallPilot, Symposium, Meridian Mail, and so on.).

- 10 Check dial tone.

End of Procedure

Switch call processing

Procedure 397

Switching call processing

- 1 Enter LD 135 on Core/Net 1 and issue the CUTOVR command. Call processing switches to Call Server 1 and service is interrupted.

LD 135

CUTOVR Transfer call processing from active Core/Net to standby Core/Net

**** Exit program

- 2 After Core/Net 1 initializes, log in to Core/Net 1 and verify that the cutover was successful and that all hardware is operational. Perform acceptance testing as required.



Core/Net 1 is now the active call processor.

Perform a customer backup data dump (upgraded release)

Procedure 398

Performing a data dump to backup the customer database:

- 1 Log into the system.
- 2 Insert a CF card into the active Core/Net RMD slot to back up the database.
- 3 Load the Equipment Data Dump Program (LD 43). At the prompt, enter:

LD 43 Load program.

. EDD

- 4 When "EDD000" appears on the terminal, enter:

EDD Begin the data dump.



CAUTION — Service Interruption

Loss of Data

If the data dump is not successful, do not continue; contact your technical support organization. A data dump problem must be corrected before proceeding.

- 5 When "DATADUMP COMPLETE" and "DATABASE BACKUP COMPLETE" appear on the terminal, enter:

**** Exit program

The Meridian 1 Option 61C CP3, CP4 upgrade to Meridian 1 Option 61C CP PIV is complete.

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